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ORIGINAL COMMUNICATIONS.

ARTICLE I.

AN ESSAY ON THE TREATMENT OF SPINA BIFIDA (*HYDRO-RACHITIS*) BY INJECTIONS OF IODINE.

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This disease or malformation is generally regarded in this country as beyond the reach of remedy. I have often had occasion to verify the truth of this statement; and if we look into surgical books of authority but a few years since, we shall find that this view is only the perpetuation of an error then quite general everywhere. Thus, in the latest editions of Mr. Samuel Cooper, we find the following opinion concerning it: "The present affection is one of a most incurable nature; for, with the exception of one case by Morgagni, a second recorded by Kellman, and two or three more recently published by Sir Astley Cooper, there is not, I believe, in all the records of medicine or surgery any cases which either got well of themselves, or were benefited by any mode of treatment." Vidal de Cassis, Ollivier, an excellent authority on this subject, Sabbatier, Itard and others, advise against any operation. I hope to prove herein that such is not by any means generally the nature of this affection.

Another error generally prevalent among physicians is the opinion that spina bifida is of rare occurrence. Chaussier (*Dict.*

de Medicine, vol. xvi.) states that in the Foundling Hospital in Paris it is the malformation of most frequent occurrence, ranking before club-foot and hare-lip. This statement of Chaussier, although correct in itself, is not so in a general sense.

There are particular years in which this malformation is of frequent occurrence. They are those which follow periods of distress, as after epidemic diseases have prevailed extensively, etc. During the year 1849, which succeeded the cholera year, I met with four cases of spina bifida in new born children; while, from 1853 to 1858, in a much larger field of observation, I have only met with one.

Since 1836, I have treated one hundred and fifty cases of hare-lip, and near one hundred and thirty cases of club-foot. During the same period, I have only met with eleven cases of spina bifida of all kinds, of which five only were subjected to treatment. Making allowance for the fact that parents and physicians generally consider this latter as incurable, and therefore do not consult a surgeon, while the former are usually presented at an early age, it still appears that hare-lip and club-foot are each more frequent than spina bifida in the proportion of, at least, ten to one.

Spina bifida presents itself in form of tumor, situated along the course of the spinal column, or upon the occiput. It may vary in size from that of a child's head to that of a small nut, but it is most frequently found of the size of a common apple. It is circular or oval, sometimes pediculated, lobulated or double.

The most frequent situation is the lumbar region, or at its junction with the dorsal, next the sacral. It is, however, sometimes found upon the back part of the head. I once met with a case of the last named variety in a young girl, aged about six years. The tumor was situated at the occipital protuberance, and was of the size and shape of a pear, with a small end attached to the head. I regret that I was unable to procure a figure of this rare tumor. Those of the head or neck are esteemed the most dangerous, but this is doubtful.

The tumor is generally covered with healthy skin; the exceptions are where cicatrices exist, in some cases indicating a progress toward cure, where ulcerations exist, with or without

appearance of cicatrices, when the covering at the centre is composed only of the membranes of the cord. This is seen in tumors of large size, and such often burst during childbirth.

The sac is lined by the arachnoid membrane and the dura mater. These are often thickened and indurated, and not endowed with the irritability of the normal arachnoid. The change which takes place is like that which is found in the tunica vaginalis in cases of hydrocele of long standing. The tumor is more or less soft and fluctuating according to the state of the circulation, *is hard during sleep*, translucent, as may be easily seen by placing the small end of the stethoscope against it and looking in while a light is applied to the other side. Where the walls are lax, the finger may be inserted between the transverse processes of one or more of the vertebræ. The spinous process is wanting.

The fluid contained in the tumor is generally clear, slightly yellow, and when allowed to stand, a fine coagulum of fibrine is seen to have formed in it. Flakes of albumen are also formed in it by the application of heat. Sometimes the cord itself is protruded through the opening, constituting a species of "hernia" (Olivier, *Dict. de Medicine*), and more frequently the nerves are found adherent to the walls of the sac. Indeed, Hewitt considers this to be the usual arrangement, and says, that in twenty preparations of spina bifida, he found but one in which it was otherwise (*Med. Gazette* for 1844).

The fluid of the sac can generally be pressed in part into the spine. Sometimes, however, the opening is closed. I have met with one case in which none of the fluid could be pressed into the spine, and in which pressure had no effect on the brain, and Velpeau regards the disease as sometimes of the nature of a serous cyst.

Among the varieties which this malformation presents are mentioned instances where it was situated on the side of the spine, and there is one instance on record where it was in the pelvis, and the bodies of the vertebræ divided. Among the complications are to be reckoned hydrocephalus, imperfection of the cord at the point where the disease is situated, club-foot, various deviations of the lower extremities and paralysis.

Several writers state that hydrocephalus is generally present, among whom may be mentioned Chelius, Vidal and others.

Chaussier, however, who founds his opinion on an examination of 132 cases, states that in the majority the disease is simple, and that any complication is to be regarded as an exception.

NATURE AND SEAT OF THE DISEASE.

Hydrorachitis is undoubtedly to be regarded as an unnatural increase of the *cerebro-spinal* fluid; at least, of that part of it situated within the spine. Of this the following account is given by Todd and Bowman: "This fluid fills the sub-arachnoid space during life. Its quantity, which varies between two and ten ounces, is in the inverse ratio to the bulk of the brain and spinal cord." "The cerebro-spinal fluid is most probably secreted by the pia mater, since it is found wherever that membrane and sufficient space exist. The ventricles of the brain contain a secretion of very similar, if not identical, characters, which Magendie describes as communicating with that of the sub-arachnoid space through an orifice at the inferior extremity of the fourth ventricle. This, however, is extremely doubtful, as the fluid is enclosed by a membrane which lines their cavities." (*Physiological Anat.*, p. 231.)

We have then in the healthy state a fluid beneath the spinal arachnoid, a fluid in the ventricles, and a very slight quantity between the arachnoid and the dura mater.

In disease, an increase of that of the spine constitutes *hydrorachitis;* an increase of that of the ventricles, *hydrocephalus.* The cavities of the sub-arachnoid space do certainly communicate with the ventricles in some rare cases of disease, and then the two diseases co-exist, and with communication. The arachnoid is also often broken in disease so as to allow the fluid to pass into the space between it and the dura mater. This statement of Todd and Bowman corresponds exactly with pathological reports of dissections, and with physiological facts, for the separate functions of the cord and the brain would lead us to expect a certain degree of independence in the circulation of each.

Where the fluid of spina bifida is situated in the sac of the

arachnoid membrane, it can only communicate with that in the lateral ventricles by a rupture of the membrane. Ollivier states that the fluid is often found beneath the arachnoid, and between it and the pia mater; and Meckel says this is its usual seat.

Treatment.—There are, as I have stated, many surgeons, and those among the most judicious, who oppose all surgical interference in this affection. I have already quoted Vidal and others to this effect, and new names might be added. I am happy to say, however, that in recent years this view is becoming less frequent than it was formerly.

The propriety of any treatment depends upon its results. After a review of what has been done, we shall be better able to judge of the value of the different operations proposed.

These are:

1. The seton, said to have been proposed by Dessault and Mathey, has been used several times, but always without success.

2. The ligature, proposed by Forestius and recommended by B. Bell, Reynard and L. de Thimecour.

3. Excision and closure of the opening with the suture, proposed by Dubourg.

4. Repeated puncture.

5. Pressure, proposed by Abernethy.

6. Injection of solution of iodine, proposed and performed by the author; performed also by Chassaignac, Velpeau and Nelaton.

7. Caustic issues near the tumor were proposed by Richter.

TABLE OF OPERATIONS FOR SPINA BIFIDA.

Puncture.

1, Laboune, 5 punctures,	cure.
1, Probart, not stated,	"
2, Rozetti, small punctures,	"
1, Wardrop, several punctures,	death.
1, Hewitt,	"
1, Velpeau, 4 punctures with lancet,	"
1, Abernethy, 10 punctures,	"

1, Otto (died of hydrocephalus), ... cure.
1, Hoffman, ... "
1, Beaunier, ... "
1, Pooley, ... death.
1, Buggiare, 2 punctures after 1 rupture, . . cure.
1, Repeated by same, ... "
2, Dumville, ... 1 cure, 1 death.
1, Stafford, ... "
1, Name not given (*Med. Chir. Review*, for July, 1837, p. 228), ... "
1, Stevens, of N. Y., with iris knife, puncture kept open, cure.
2, Cooper, ... "
1, Each, on occiput, ... death.
1, Cooper, ... "
1, Robert, ... cure.
1, Rosetti, ... "
1, Skinner, 70 operations, ... death.
1, Dupuytren, result not known.
1, Philippe Boyer, ... "
1, Robert (de Beaujon), ... cure.
1, Hawthorn, puncture and pressure, ... palliation.
1, Tatum, from tetanus, ... death.
1, Ogle, ... "
1, Sir Philip Crampton, 22 punctures, . . . cure.
1, Hutchinson, ... death.
1, Barnes, puncture and rupture, ... "

Excision.

2, Trowbridge, after constriction, ... cure.
1, Sherwood, ... "
2, Dubourg, ... "
1, Tavignot, ... death.
1, Roux, ... "
1, Nott, ... cure.
1, Mott (probably not connected with spine), . . "
1, Cowan, result not known.
1, Hilton, ... death.
1, Childs, ... "

Pressure.

1, Abernethy, ... death.
1, Cooper, ... palliation.
1, Stueber, ... cure.
1, Beaunier, ... "
1, Recamier, ... "

Ligature.

1, Heister, ... death.
1, Reynard, ... cure.
1, L. de Thimecour, ... "
2, Trowbridge, failure several times, ... "
Ligature applied a short time, . . "
1, Peige, ligature and excision, ... "
1, Dubois, with pins, ... death.
1, Erichsen, ... "

Cases of recovery after rupture: Serris, Ulhoorn, Nance, Stafford,—4.

A resume of the above cases gives the following result:

	Cure.	Death.	Unknown.	Palliated.	Total.
Puncture, ...	17	16	1	1	35
Excision, ...	7	3	1	—	11
Ligature, ...	5	3	—	—	8
Pressure, ...	3	1	—	1	5
	32	23	2	2	59

Chelius says that repeated punctures nearly always result unfavorably (*System of Surgery*, by South, vol. 3, p. 187).

Brechet, who tried puncture on a large scale, found it always to fail.

M. Pacoud operated several cases and always failed.

M. Bajard did the same with the same results.

Besides Sulzman, Trompei, Porter.

M. Lyon states that he has punctured seven or eight cases of spina bifida without benefit.

Indeed, I do not regard this table as of much practical value. Most frequently cases are reported so imperfectly as to be of

little utility. It is for this reason that I have not sought to make it more extensive.

There are, however, two practical inferences which may be drawn from these cases. They are:

1st. The success of puncture is proportioned to the smallness of the instrument.

2nd. That when the fluid became turbid it indicated a favorable progress towards cure.

Injections of Iodine.—The cases operated on by injections of iodine, up to the present time, are ten in number; of these, five belong to the author, two were treated under my direction by Dr. S. G. Crawford, formerly of this city, one was treated by Chassaignac, one by Velpeau, and one by Nelaton.

I have no report in detail of the cases treated in Paris. Such as have been published will be added after the detail of the cases treated under my own observations.

Case I.—The subject was a girl thirteen years of age. The tumor, situated at the top of the sacrum, was nine inches in circumference and three inches in height. Its surface and the skin adjoining presented numerous cicatrices, marks apparently of former ulcerations. The child was partially paralytic in the lower extremities, idiotic, and passed the urine and fæces involuntarily. The head was small and the bones perfectly formed.

The first injection was performed on the 2nd December, 1847. A puncture was made with the point of the lancet half an inch distant from the base of the tumor, and a small-sized exploring trochar carried thence into the sac. Through the canula, a solution of half a grain of iodine, with one grain of iodide of potassium in one ounce of distilled water, was injected. The canula was immediately withdrawn, and a compress and bandage applied so as to prevent the escape of the liquid.

The injection produced a sharp pain which soon subsided. Redness, heat, and tenderness of the tumor followed, for which a cathartic was administered, and evaporating lotions applied to the part. Compression was resorted to as the heat and tension subsided, and, December 27th, the tumor was about half its former size.

At this time, a second injection was resorted to of half the strength of the first. This produced little inflammation. The compression was continued. January 15, 1848, the fluid was so far absorbed as to render it easy to press most of it within the spine, and a common spring truss for hernia was applied, the pad upon the opening.

The case then passed from under my observation, but fell under the care of Dr. Huber, who had at that time charge of the county poor at Chicago. The following is his account of the case and his treatment:

"I injected the tumor thirteen times, viz., May 3, 10, 20, June 15, 22, July 14, August 10, 15, 25, September 5, 16, 26, and October 20, 1848. The injection for the first four times was of the strength of four grains of iodine and sixteen grains iodide of potassium to the ounce of distilled water, beginning with one and a half and increasing to three ounces at the fourth injection.

"The sac was then much contracted, and I therefore doubled the strength of the solution and injected but half an ounce. After the first two operations the child had some slight febrile symptoms, but not since. I consider the cure complete. She has improved in the use of her lower extremities, being now able to walk across the room."

This case was published in the *Chicago Medical Journal* for 1849, p. 495.

Two years after the operation the child remained cured, and much improved in every respect.

Case II.—This case occurred to me, April 12, 1849. The tumor was of the size of a closed fist, and had been ruptured during labor.

By the application of artificial heat, the first ill effects of the rupture were dissipated. A reddish serum was discharged from the sac and canal, which, on the 17th, became copious and offensive. Injected a solution of iodine, 4 grs. iodide potassium, 12 grs., to the ounce of distilled water. The solution escaped as fast as injected.

30*th*. Repeated injection; discharge purulent.

May 2*d.* Injected with solution of sulphate of copper, and applied compression over the opening. The sac was contracted down to a hard tubercle, with a small opening in the centre.

The injection was repeated on the 4th and 6th, and the child seemed well in every respect.

May 12*th.* Opening quite closed; *head noticed to be enlarging; bones separated.* This continued till June 1, when the child died in a paroxysm of convulsion.

This case resulted fatally from closing the fistulous opening in the skin too soon, but it illustrates, in a striking manner, the beneficial effect of injections into the spinal canal, and the little danger to be apprehended from their use. The child lived over six weeks.

I was not aware at the time of the danger of making compression over such an opening, but held, in common with the whole profession, the erroneous opinion that the danger in cases of inflammation of the meninges of the cord and brain was greatest when an opening existed.

This is an error which has recently been pointed out by Dr. Thompson, of Columbus, Ohio. Far from closing such an opening, the sac should be punctured if acute inflammation results from treatment, and the liquid drawn off.

Published in the *Chicago Medical Journal* for 1850.

CASE III.—*Spina Bifida, accompanied by Hydrocephalus.*

Feb. 12, 1850. A female child, three months old, born at seven months, and very feeble, was presented, affected with spina bifida and hydrocephalus. The tumor occupied the lumbar region, was three and a half inches in length, two and a half in breadth, and one and a half in elevation.

In the usual manner I injected it, using iodine ½ grain, iodide potassium 1½ grains, in 1 drachm of distilled water, without drawing off any fluid.

This was repeated but once. In the interval, ⅛ grain of tannic acid, in ½ drachm of distilled water, was injected at intervals of eight days.

After the last injection, which was of iodine, twitching of the

members occurred, to such a degree as to induce me to draw off the liquid and replace it in part with distilled water. This gave immediate relief. The child took the breast and remained well for eighteen hours, when it took convulsions and died.

The opening into the spinal canal was perfectly closed. The sac contained one drachm of clear water, without any effusion of lymph or unnatural vascularity. There was no sign of irritation about the tumor to account for death. The head was large, measuring 18 inches in circumference. An examination of it was not allowed.

The tannic acid was twice substituted for the iodine at the suggestion of a medical friend, under the supposition that its astringency would be more effective in preventing effusion. It was found, however, to produce more irritation with less tendency to absorption afterward, and was therefore discontinued.

Although death occurred in this case suddenly, there is no reason to attribute it in any degree to the spina bifida, or to the treatment employed; it was the result of other causes, probably the disease of the head. The effect of four injections in as many weeks in closing the opening into the spine, without giving rise to suppuration or considerable inflammation, must be regarded as highly favorable results of the treatment.

Case IV.—*Sept. 20th*, 1849. Saw a female child, aged four days old, affected with spina bifida and hydrocephalus. The tumor was about three inches in length and half as broad. There seemed to be a division of the bodies of some of the vertebræ. The covering of the tumor was semi-transparent, and seemed to be composed of the membranes of the cord and cuticle. Indeed, this latter was wanting over a space as large as a shilling, where an ulcer existed. The head was large, measuring 19 inches in circumference. The right foot was affected with talipes varus. The movements of the members were feeble. The urine ran away *guttatim*.

Oct. 9th. I injected the tumor in the usual manner, using 1-16 grain of iodine with twice that quantity of iodide potassium in half a drachm of water. Some reaction followed, which soon subsided; and, at the end of a week, the tumor could be kept

at a level with the sound skin by the applicatian of collodion. This was continued, and the sac did not fill again.

The child lived seven months after this operation, and died of hydrocephalus, for which it received treatment, which I have detailed in a separate article on that subject.

Case V.—A female child, aged four months, was brought to me, March 11th, 1855, with a spina bifida, situated at the middle of the lumbar division of the spinal column. The tumor was two and a half inches in length, one and a half in breadth, and about an inch in elevation. It presented the usual symptoms, except that an ulcerated surface of the size of a quarter of a dollar existed at the centre. The fluid could be, in a great measure, pressed into the spinal column, the child becoming uneasy. The head was a little larger than natural, and the sutures at the superior part not closed. In other respects, the child was well formed and healthy.

March 12th, 1855. Injected the tumor with one drachm of a solution containing one-eighth of a grain of iodine, three-fourths of a grain of iodide potassium, to one drachm of distilled water. I was assisted at this time by Prof. Freer, and Drs. Fisher and Morfit, of this city. On other occasions, Dr. T. Rush Spencer and several physicians visited the case with me.

This injection was followed by some heat and fullness, which subsided, and the tumor became more flaccid. Light compression was then used upon it.

March 17th. Repeated the same injection; also, March 22, 25, 28, and April 1, 10 and 14. At the end of this time the surface of the tumor was on a level with the sound skin, the ulceration was healed, and the fluctuation had entirely disappeared. Before each injection, a quantity of fluid equal to that of the solution to be thrown in was withdrawn.

This child was delicate, and the symptoms of a febrile nature after each operation were greater than I have before witnessed in any case. This I attributed to impurity of the iodide employed, and after changing it, less effect was noticed. At first, the fluid withdrawn was limpid, but after each injection it became

turbid, of a whitish hue, and had flakes of lymph and albumen floating in it.

The child returned home, April 20, with every appearance of being cured, and with the promise on the part of the parents that should the symptoms of hydrocephalus increase, they would return to have the head injected. This they did not do; and in June, 1856, fourteen months after the completion of the treatment, I learned authentically that the child was in good health, the spina bifida perfectly cured, and the head not materially worse than at the time of the treatment being employed.

Case VI.—This was a child, aged three months, in good health, except a tumor of the size of half an orange, situated at the lower part of the lumbar region, with all the characteristics of spina bifida. The case was intrusted to the care of Dr. S. G. Crawford, whom I furnished with the instrument I was in the habit of using.

Dr. Crawford used the injection three times, at intervals of two weeks, applying the collodion when it was soft, at the end of which time the tumor was level with the surrounding skin. A pan, supported by a band, was then applied.

The third injection in this case was composed of four grains of iodine and ten grains of iodide of potassium to the ounce of distilled water. Of this two drachms were thrown in. The first two were of half the above strength.

Six months afterward, the case was reported perfectly cured.

Case VII.—This case occurred in the practice of Dr. Crawford while he was treating the last one.* It was in a new-born infant. The tumor was situated near the end of the sacrum and was pediculated; it was of the size of a hen's egg, the integuments thick, and the fluctuation obscure. The child was perfectly well formed in other respects.

In view of the slight effects produced by the injection in the former case, Dr. Crawford resorted at once to a solution con-

* The year 1848 was the first of a series of years in which the cholera prevailed. The terror produced by the disease caused many malformations, besides changing the usual relations between the numbers of male and female births, as has been noticed elsewhere.

taining iodine one grain, iodide potassium three grains, to one drachm of distilled water. After drawing off considerable fluid, this was injected, allowed to remain about a minute, and then pressed out in part. A compress and roller were then applied over it.

The inflammation which resulted was acute, but gave rise to no cerebral or spinal symptoms, and subsided at the end of five days. Afterwards, the compression was increased and continued for a month. At the end of this time, the tumor was hard, wrinkled and without fluctuation, about one-fourth of its original size.

Four months afterward, it remained in the same state and seemed perfectly cured.

CASES OPERATED IN PARIS.

M. Chassaignac performed the operation in June, 1851. He injected equal parts of tincture of iodine and water, first evacuating the tumor and placing the finger so as to prevent the injection from passing into the spinal opening. After a short sojourn, the solution was allowed to flow off.

For six weeks there was no change in the tumor, but at the end of that time it disappeared.

M. Debout stated that he had very recently seen M. Velpeau practice the same operation. No ill effect resulted. I am not aware that M. Velpeau has published his observations.

The case of M. Nelaton is reported in the *Gazette Medicale* for June 4, 1854. The subject was a new-born child; the tumor was pediculated. M. Nelaton drew off the water and injected tinct. of iodine, which was retained a few minutes and then evacuated. The pedicle of the tumor was compressed during the operation, and afterwards a gum elastic ligature was placed lightly around the base. At the end of fifteen days no change had been noticed, except a little increased firmness. No dangerous symptoms occurred.

The progress of physiology enables us to understand and explain some of the circumstances connected with spina bifida which have heretofore been considered as contra-indicating any operation.

A. The paralysis and contraction of the lower extremities.

That disease or imperfect development of the spinal cord at one point would produce paralysis of the lower extremities, is a fact which has long been known; but that the same lesions might give rise to permanent contraction of the muscles of those members, is a fact more recently established. Marshall Hall, Brown-Sequard and others, have proved this by their experiments on animals. Surgeons have witnessed it as the effect of injuries. In a man of fifty-five years of age, who received an injury of the spine at the top of the dorsal division, producing at first perfect paralysis, contraction of the lower members took place, flexing the thigh upon the pelvis, and the legs upon the thigh, firmly for over two years, at the end of which time the patient died. "Separation of the muscles from the brain increases their irritability" (Marshall Hall, *Med. Chir. Review*, vol. 22).

It is true that Marshall Hall was also of the opinion that separation of the muscles from the spinal cord destroys their irritability. There are two facts in regard to the pathological anatomy of spina bifida which bear upon this point:

1st. Ruysch has remarked that the attenuation of the cord rarely extends below the opening in the spine.

2nd. In cases of spina bifida of the sacrum or lumbar region, the spinal cord is longer than natural. "It is prolonged to the end of the sacrum" (*Ollivier d'Anger, Traite des Maladies, de la Moelle Epiniere*).

We see, therefore, that the cases in which the muscles have no connection with the brain must be most frequent. When the tumor is situated at the extremity of the cord only should we expect paralysis without contraction. It is to be regretted that in but few reports of cases of this malformation have the appearances on dissection and the symptoms been described with sufficient accuracy to enable us to judge of their relations to each other.

An operation, if successful, is often followed by cure of the paralysis and the deformity from muscular contraction. This effect was witnessed in the first case operated by me, already

reported, in the case reported by Dr. Latil de Thimecour (*Gazette Medicale* for 1845, p. 764, *et. seq.*) the same thing occurred, and also in the two cases cited by Messrs. Probart and Rosetti.

Experiments on animals and observation on man have abundantly shown that extensive injuries of the brain, spinal cord and nerves are capable of being repaired. Thus, M. Flourens has found that nerves could be crossed and unite the extremity of one to the root of another, and *vice versa*. Brown-Sequard has found that when a piece of the cord is removed in some animals, it is regenerated. Dessault reports the case of a soldier in whom the cord was divided, and who recovered and retained the power of voluntary movements. Flourens also found that extensive longitudinal wounds of the cord in the goose were healed so as to leave no paralysis behind.

B. The spasms, so frequent and so fatal in spina bifida, are not owing to any incurable, organic, or functional disease of the nervous system, but to want of the natural pressure on the central organs, the walls of the tumor not giving sufficient support to the fluid within.

That want of pressure on the brain gives rise to spasms and insensibility, is a fact which has been often observed, and which I have particularly insisted upon in the report of a case of hydrocephalus. But it does not appear to have been so generally admitted as it deserves to be; I therefore add here the testimony of others. And I am particularly gratified to be able to quote so just and competent an observer as M. le docteur, Jules Guerin. He says (*Gazette Medicale* for 1842, p. 202): "If too much pressure on the tumor produces paralysis always, and loss of consciousness often, it is beyond dispute that the sudden cessation of the compression which the contents of the sac exercise on the cord, may produce the same accidents. We know the experiments of Magendie on the effects of abstracting the cerebro-spinal liquid. We recall the interesting observation of M. A. Berard, who, after having trephined a patient fourteen times for a fungus of the dura mater, saw his patient fall senseless when the brain was un-

covered, and could only restore him by using strong compression of its substance. The unfavorable influence of this want of compression is shown more directly and positively in the second case of M. Dubourg, in which the little patient, which cried strongly at the commencement of the operation, lost all movement, and remained senseless when the tumor was evacuated. We remember also, in 1836, accompanying M. Philip Boyer to see an infant treated by repeated punctures. We several times saw the patient lose all consciousness when too much water was evacuated, and could only be rendered conscious by a tight bandage and compress upon the tumor."

These effects do not differ much from those observed in animals dying of hemorrhage, in which syncope and convulsions are observed.

As the presence of the cerebro-spinal liquid antagonizes the pressure of the blood, the sudden removal of the former may either induce a syncope, or, if this be avoided, a fullness of the vessels of the brain, as has been stated by Todd and Bowman.

If an operation is successful, although a bony arch may not be formed, yet the opening of the spine is closed up by a dense, firm tissue, which supplies its place.

APPLICATION OF THE DIFFERENT OPERATIONS PROPOSED.

1. We may, I think, pass by as unworthy of consideration the treatment by the seton, caustic and pressure, as having never produced a radical cure in a single instance, except the latter, perhaps. It is doubtful if the case reported by Sir Astley Cooper, in which a child retained the fluid in the spine by means of a truss, is to be regarded as in any degree palliated. Certain it is, that pressure is generally not only inapplicable, but dangerous if used to a great degree.

2. Excision will probably never be resorted to by any one who has carefully studied the subject. The objections to it are the liability to divide the nerves, and even the cord itself, when adherent to the walls of the tumor; the sudden removal of the liquid, and the entrance of air into the opening, both of which are attended with danger; the great difficulty in securing union by the first intention throughout the whole extent of the wound;

finally, because, in the express language of Vidal, "all those who have tried it have found it to result fatally" (*Traite de Pathologie Externe*, vol. 5, p. 765).

3. *Puncture.*—There are many cases reported in which it is difficult to determine from the description whether tapping or acapuncture was performed. In reference to puncture, whether with a lancet or trochar, the same remarks apply to this operation which we have made concerning excision. The name and authority of Cooper have been sufficient to give it currency; but a careful examination of the cases in which he used it will lead to a conclusion not favorable to its repetition. In one case, Sir A. Cooper used a sharp needle. After repeated attacks of spasm and inflammation, the patient remained without a cure, although the accidents did not prove fatal. The cases of Sir Philip Crampton, of Stevens and several others, were by acapuncture, which is free from many of the objections of the former.

With the exception of such cases, the operation has uniformly failed. Brechet, Pacoud and Bajard have used it several times each, and have never found it to succeed. Chelius says that repeated punctures nearly always fail. The reason for this difference is obvious. The punctures produce an inflammation of the walls of the tumor by which they are thickened, with less danger of ulceration than results from larger wounds. The evacuation of the liquid has no tendency to cure the disease, and is not free from danger, as I have shown.

4. The ligature, proposed by Forestius and recommended by B. Bell, has recently been revived by Reynard and L. de Thimecour. The former, by placing a large quill on each side of the root of the tumor, and passing the ligature through the hollow of each, tying it so as to strangulate it; the latter using, instead of the quills, two rods of wood, but placing them in the same position so as to act in the same way. I confess that if it were not for the superior claims of the injections of iodine, this is the method which I should prefer among all those at present known. It has the advantage of not evacuating the fluid suddenly, of not exposing the membranes to the contact of air, and if excision be allowable under any circumstances, it must be in connection

with compression, as has several times been done already. There is a drawback upon the value of this method, which is, that in the greater number of cases, according to my observations, the tumor is so flat as not to admit of such an application being made, even. This is particularly the case in new-born infants; the cases of large and pediculated tumors being those mostly of patients of more advanced age.

Thus far its application has been followed by more favorable results than the use of either of the preceding methods of treatment.

5. *Injections of Iodine.*—This method of treating spina bifida is said to have been first proposed by Velpeau. The only passage of his writings which I am am acquainted with bearing upon this point is the following:

"It will be readily understood that it is not the *manuel operatoire* which embarrasses, it is the danger of the operation itself; but how great the object in attacking spina bifida, hydrocephalus, etc., by the aid of a remedy, an operation, which succeeds in so many cases, has so few inconveniences when applied to other cavities of the same nature."

"On the other hand, how shall we go to work? *Who will dare the first to throw the tincture of iodine into a spina bifida, or into the cavity of the cranium, knowing that inflammation of the meninges is rapidly mortal?*"*

In his "Essay on Medicated Injections," published in 1846, M. Velpeau alludes to the subject, but does not recommend these operations (see p. 123).

This notice from such a source certainly is not well calculated to encourage a trial. I think, therefore, it is not too much to claim for myself whatever of merit there may be in recommending and carrying into execution the injection of iodine into the cerebro-spinal cavity. This point, besides, is not, that I know, by any means contested in France. M. Monod, in a report made to the Society of Surgery, at its sitting of the 16th March, 1854, says: "M. Brainard had the honor of presenting, in 1847, the first case of cure of spina bifida, by iodine injections, known to science."

* Recherches sur les Cavites Closes, 1843, p. 191.

Although the value of any method of treatment must be determined by its results, yet the conformity of its mode of action to natural processes may weigh much in its favor. What is desired in cases of spina bifida is a means of inducing, with certainty, upon the internal surface of the sac of the tumor, a deposit of lymph, and in the walls of the tumor an adhesive inflammation of a moderate degree of intensity, without wound of the covering, which is often quite abnormal in structure.

It seems obvious to me that injections of iodine in solution, judging *a priori*, are more likely to accomplish these objects than any of the modes of treatment hitherto employed. There may indeed be different opinions about the best method of using it, but experience will reconcile these. MM. Chassaignac, Velpeau and Nelaton have preferred to evacuate the tumor, and after injecting it with tincture of iodine, letting this also flow out. The rules which I have adopted are as follows:

1. Make the puncture in the sound skin at the *side* of the tumor.

2. Inject the solution of iodine and iodide of potassium, commencing with $\frac{1}{4}$ grain of the former to $\frac{3}{4}$ of the latter, and retain it by slight pressure.

3. Evacuate no more of the liquid than the quantity of injection about to be thrown in.

4. If convulsions supervene, the fluid may be drawn out and its place filled with distilled water. (I have not had occasion to resort to this practice more than once.)

5. Lay the patient on the face, and if there be heat, apply evaporating lotions to the tumor and to the head.

6. When the tumor becomes flaccid, apply collodion or other means of contracting the skin. This should be continued for some months after the swelling has disappeared.

7. After the effect of an injection is past, repeat it as many times as may be necessary, and gradually increase the strength according to the effect produced.

By using these precautions, I have thus far avoided serious accidents, although four out of five of the cases which I have had occasion to treat were affected at the same time with chronic hydrocephalus. In new-born infants, I should be disposed, until

experience shall have further enlightened us, to adhere to this practice. In older persons, and particularly when the tumor is pediculated, I should not hesitate to follow the practice adopted by the French surgeons. Theoretically considered, it would appear that the solution injected ought to be applied to the surface which secretes the fluid, which, as we have seen, is probably the pia mater; but in practice it seems to have been sufficient to thicken the covering of the tumor to effect a cure of the disease.

CASES IN WHICH TREATMENT IS INAPPLICABLE.

In advising an operation for the cure of spina bifida, I would by no means be understood as recommending its application without regard to the peculiarities of each case. I do not, however, regard any rules heretofore given as being in all respects sufficient on this point.

The following are the circumstances in which I have advised against interference:

1. When the tumor is small, and the patient several years of age and in good health.

A young lady, eighteen years of age, well formed and in good health, except a spina bifida at the junction of the cervical and dorsal regions, was brought to me for advice. The tumor had existed from birth, but was not increasing in size; was tense during sleep, and flaccid at other times; could be, in a great measure, pressed into spine, but much pressure caused uneasiness. This girl was in good health, excepting that the mother stated her to be nervous, and subject to starts at slight noises and unexpected sights. I advised against interference.

2. When the child is laboring under acute disease, whether this be of the head, of the spinal cord, convulsions, etc.

I do not consider paralysis and contraction of the lower members a contra-indication. They depend upon a state of the cord which may be cured, and they have, in several instances, disappeared after a cure, as before stated.

Neither is hydrocephalus or double tumor to be regarded as a bar to the operation, although, no doubt, they add to the danger of the disease. Four out of five of the cases I have

treated had hydrocephalus, but in no instance did the treatment fail to cure the spina bifida. The only doubt I should have in this case would be whether the head or back should be first treated. (This part of the subject I have noticed in an article on Hydrocephalus.)

Still less are the existence of umbilical hernia, unless of unusual size, ulceration on the surface of the tumor or its great vertical extent, to be regarded as serious objections. Two of the cases treated by myself had ulceration on the tumor, one had cicatrices, obviously the result of ulceration, but all these were cured.

It would only be a combination of these complications very unusual, or evidence of serious malformation of the nervous centres, which would induce me to abandon the case as incurable.

Of the abnormal states of the cord noticed by Meckel as associated, viz., enlargement, flattening, division into two parts, it is doubtful if either is an obstacle to a use of the members in case the disease is cured.

NOTE.—M. Paget, in 1854, treated a tumor of large size by subcutaneous ligature. "A strong, double silk ligature was passed subcutaneously around the tumor, the ends being finally brought out in the middle of its upper part." The ends were tied loosely and attached to a band of elastic webbing, which was kept tense.

For three days no effect was produced; the child died on the eighth day. The vessels of the spinal cord were found much injected; no other appearance of inflammation (*North-American Med. Chir. Review* for Nov., 1858, p. 1117; from *Med. Times*).

The spinal tumor sometimes communicates with the ventricles through the canal in the centre of the cord. A case where this occurred is related in the Transactions of the Pathological Society of London (ib., p. 1120).

When this is the case, the tumor sometimes diminishes when the head increases, or the reverse.

A case of spontaneous cure, and another where it seemed to be cured by an ulcer on the sac, are related in the *Med. Chir. Review* for Nov., 1858, p. 1120.

ARTICLE II.

REPORT OF TWO CASES OF DIPTHERIA, WITH REMARKS.

(Read before the Chicago Academy of Medical Sciences.)

By DeLaskie Miller, M. D. Prof. of Obstetrics in Rush Medical College.

A disease of the throat, known as "membranous sore throat," and designated also "diptheria," has prevailed of late to a considerable extent in different sections of this country, and also in various parts of Europe, assuming there, as in some parts of the United States, a most malignant and fatal form, but which, as I believe, has not been met with in this city until quite recently. The following cases, presenting the characteristic appearances and pursuing the usual course of this disease, may be of some interest at the present time.

I was consulted, at my house, July 13th, in regard to the illness of the little daughter of Mrs. W., aged about 8 years, who was "suffering from sore throat." Learning that the bowels were costive and that she had some fever (I did not apprehend an attack of scarlatina, for I had attended the child for that disease two years before), I advised a saline cathartic, to be followed by a full dose of Dover's powder.

Upon visiting the patient next day, which was the first time that I examined the case, I learned that she had been affected with soreness of the throat and painful deglutition for several days, accompanied by the usual symptoms characteristic of an onset of fever, such as frequent chills, alternating with flushes of heat, with darting pains through the back and limbs, pain in the head, with frequent pulse. The submaxillary glands were considerably swelled and tender to the touch; the tongue was covered with a thick, tenacious, yellowish coat; the fauces were of a deep red color and slightly edematous, and were, with the tonsils, partially covered with numerous small patches of a fibrinous exudation, which presented a dirty, yellowish-white color; the gums were also considerably swelled. I prescribed Dover's powder, as occasion required, to control pain and restlessness; also, chlorate of potassa 4 grs. every fourth hour, in solution, and the following as a gargle, to be diluted when used:

Liq. soda chlorinat.; also the following gargle, to be used frequently:

℞	Plumbi. acet.,	grs. xx.	
	Morph. "	" iv.	
	Glycerine,	℥ij.	
	Aq. rosa,	℥ij.	M.

15*th*, *a.m.* Appears much the same as yesterday; the glands rather larger and more tender; the pharynx quite covered with the fibrinous exudation. Much relief has been experienced by the use of the gargle, which I ordered repeated more frequently, and continue medicine as before. I also urged the importance of giving nourishment, which the patient was averse to taking, on account of the pain occasioned by the act of deglutition.

18*th*. A slight amelioration of all the symptoms; continue treatment.

20*th*. Still improving; appetite returning.

From this date she continued to convalesce, though slowly, till to-day (August 1st). She appears to have quite recovered, save some degree of debility.

Mr. C. M. consulted me, July 21st, on account of sore throat, which came on three or four days before, and was getting worse rapidly, causing considerable pain, especially during deglutition. I found the tonsils slightly swelled, and preternatural redness and tumefaction through the pharynx, with small patches of diptheritic membrane on the tonsils and fauces; the tongue thickly coated and yellow. Except the local symptoms in the throat, the patient professes himself as feeling quite well. I applied a strong solution of nitrate of silver to the affected part, and ordered a cathartic, and the application of spirits of turpentine externally to the throat.

22*nd*. The patient has considerable fever, and suffers more from the affection of the throat; the exudation has become thick and continuous, forming a pseudo-membrane, covering the pharynx; the uvula very much swelled and elongated, causing the greatest annoyance, rendering excision of a portion of it necessary; the bleeding, which was considerable, afforded slight but immediate relief. I prescribed chlorate of potassa and morphia in solution internally, and the solution of chlorinated

of soda; also, acetate of lead in glycerine, as a gargle, to be used frequently.

After about the third day after I first saw him, the diptheritic membrane began to separate, and was gradually removed in considerable patches, leaving the parts below intensely red and slightly roughened, and from the tongue the papilla projected in long acuminated points. At this stage the patient felt considerable prostration, and his pulse becoming soft and weak, I gave the following, in addition to the medicine before prescribed:

℞	Quinia sulph.,	℈ss.
	Acid sulph. arom.,	ʒij.
	Tr. gentian co.,	ʒj.
	Syr. raspberry,	ʒj.

M. S. Take a teaspoonful every sixth hour.

The progress of his convalescence from this time has been continuous, characterized, however, by unusually slow return of strength, which even now (August 1st) is not complete.

I might add other cases, but as they differ in no essential particular, either in the symptoms, course, treatment or termination, they would unnecessarily prolong this paper.

There are several diseases having some symptoms in common with diptheria, but differing, as I conceive, so essentially in their nature, as to be distinguished without difficulty, viz., pharyngitis, inflammation of the tonsils, croup, and the angina of scarlatina.

That it is not pharyngitis, as usually met with, or as modified by the depressing influences that aggravate disease among the poor in cities, or from impaired constitutions of the patients, is manifest from the course of the symptoms and by the appearance of the pseudo-membrane. The patients which I have attended with this disease have been in good circumstances in life, and reside in healthy localities in the city. The direct depressing influence of diptheria upon the system is also much greater than would be expected from pharyngitis.

The same circumstances also distinguish it from tonsilitis, so far as they relate to the course of the symptoms and the exudation of the fibrinous membrane, which is not a concomitant of inflammation of the tonsils.

The membranous exudation is met with in croup, but in croup

the parts first affected are the trachea and the larynx, and the membrane is confined to the trachea, or reaches the pharynx only by extension from below; whereas, in diptheria, the parts especially involved are those concerned in deglutition, and the membrane extends from above downwards, and has uniformly presented the appearance of having a feebler organization than the membrane of croup.

From the angina of scarlatina, diptheria may be distinguished, first, by the presence of the membrane, and, second, by the absence of the eruption, and also, in the cases which have come under my observation, by the fact, that the patients were not subject to scarlet fever.

For these reasons, and others which will present themselves to the notice of every practitioner who may have occasion to treat it, we have sufficient grounds for treating diptheria as a distinct affection.

ARTICLE III.

A CASE OF SPONTANEOUS GANGRENE OF RIGHT LOWER EXTREMITY.

REPORTED BY GEORGE SCHLOETZER, M.D., OF CHICAGO.

Mrs. S., aged 43 years, was attacked, in the early part of February last, with an apparently slight indisposition, accompanied with a little œdema of the upper lids, which was attributed to an erysipelas eruption, from which the patient had frequently suffered. Except during these attacks of erysipelas faciei and an attack of typhus fever four or five years ago, she states that she had always enjoyed good health. Menstruation has always been regular. Patient has borne five children, each labor having been attended with considerable difficulty.

On the 6th and 7th of February, she experienced a peculiar sensation in the toes, and shortly afterwards, pain in the region of the hip and right side of the pelvis, which extended downwards as in sciatica. Mrs. S. supposed these pains proceeded from rheumatism, and as they continued to increase in severity, she called her physician on the 8th, who also at first regarded

the disease as rheumatism. As there was some fever, he prescribed antiphlogistic remedies, administered pot. nit., etc., and ordered cups and blisters. Soon after, other important symptoms supervened. The toes and then the whole limb became very cold; sensation and motion were soon lost; the toes gradually assumed a gangrenous aspect; the skin of the leg became livid red; and large, bluish spots soon appeared upon the thigh. On the 9th, at the regular period, the menses commenced, and continued three or four days.

On the 12th of February I was called in consultation. I found the distal half of the toes black and dry (mummified), as we often see in gangræna senilis; the leg, and nearly the whole of the thigh, was covered with large, dark, violet-red maculæ; below the knee, the limb was without sensation and power of motion; the foot was cold, and the natural heat of the thigh was much diminished, except at the uppermost, where it was normal; the right popliteal and femoral arteries were without pulsation; the pulsation of the left femoral artery was stronger than in health; the rheumatic pains, which were now more like those of neuralgia, were still present, but somewhat diminished in violence, and resembling formication. Pulse 115. Upon examination of the heart, I could find nothing abnormal; in the lungs, however, were extensive rales, accompanied with cough; tongue coated; appetite small; bowels confined.

Upon a careful examination, I was disposed to refer all the symptoms to arterial obstruction; whether produced by arteritis, thrombosis, or by pseudo-plasma (infiltration, tumor), in the region of the large vessels, must remain doubtful; probably, however, the obstruction was caused by thrombosis—embolic (coagulum formed in a larger vessel and carried by the blood to the opening of a smaller one).

The prognosis was certainly very unfavorable as regards the limb, with scarcely a hope of saving life. It was now determined, since antiphlogistic remedies had already been employed, to give those of a supporting and stimulating character—cinchona decoct., quinia, wine, nutritious beef tea. Particular regard to change of air was enjoined. Heated woolen coverings were placed around the limb, which was repeatedly rubbed with

spirituous lotions and turpentine. On the next day, electricity was applied to the limb and continued several days. Heated sacks of sand were also placed around the leg and thigh, by means of which a considerable degree of artificial heat was retained. No pulsation reappeared in the arteries, and no remedy seemed to exert the least influence upon the course of the disease. Still, on the 16th of February, the radial pulse seemed to improve, being 90–95, and of better quality.

The integument of the whole limb became more firm, dry and parchment like, and of a darker color. During these modifications, however, the toes scarcely changed their appearance. The stools, which at first had been somewhat confined, were afterwards (Feb. 20th) more frequent (from two to four daily) and watery.

During the evening and night the fever was more violent. The patient had become much emaciated; the pain in the limb was now slight, unless it was moved, or pressure applied to the thigh, near the line of demarkation.

Feb. 22nd. The healthy and unhealthy tissues have begun to separate. Subcutaneous emphysema, from generation of gas, had already pervaded the upper portions of the thigh. Except near the line of demarkation, the dry gangrenous process was confined to the external tissues, and the moist to the internal.

The question now arose whether it was advisable to remove the diseased portion by amputation. In consultation with several physicians, it was decided not to operate at present, since rales were heard throughout the whole chest, since dullness on percussion existed in the abdomen, which seemed to indicate an exudation into the peritoneal cavity, and since, further, the sloughing extended, on the internal aspect of the thigh, nearly to the right labium, and on the external aspect, almost as high. Moreover, there continued a feverish pulse; diarrhœa. The strength was failing, and emaciation becoming extreme.

March 1st. The space formed by the separation of the unhealthy from the healthy tissues is becoming broader and deeper. A fetid discharge flows from the fissure; in other parts are formed phlyctenae and sloughs, from which exudes the same kind of fetid discharge. The size of the limb is not much in-

creased, since the generated gases and fluids pass off through the sloughs and small incisions which have been made for the purpose. The left foot and leg is already becoming quite œdematous. Pulse feverish (115–125) and soft.

March 5th. There has been for several days a remarkably strong pulsation of the abdominal aorta. Tongue dry, and bright red, as if deprived of its epithelium; no appetite; fluids can only be swallowed with difficulty; there is great restlessness; a colliquative diarrhœa is rapidly reducing the patient's strength.

March 7th. Patient has succumbed. During the last few days there has been no marked change in the general appearance of the limb. The soft tissues, including the muscles, arteries and nerves, upon the inner and posterior aspect of the thigh, embracing nearly two-thirds of its circumference, are destroyed almost to the bone. No autopsy was permitted.

[We append to the foregoing case some notes by Prof. Blackman on the subject of gangrene, which will be found interesting. They are from the *Cincinnati Lancet and Observer* for 1859.]

Cases of cerebral gangrene, resulting from obstruction of the cerebral vessels by detached "cardiac vegetations," have been reported by Kirkes, Ruhle, Tuffnell, Burrows and Virchow. Mr. Paget has also collected a number of cases in which pulmonary gangrene was attributed to the same cause; but of the seventeen cases collected by him, none occurred in the puerperal state.

I confess when I first saw my patient I was not aware that mortification of the extremities had ever been observed in the puerperal state. Since my attention has been directed to the subject, however, I find that it has been discussed by Prof. Simpson, in the second series of his Obstetrical Memoirs; and by Virchow, in his *Gesammelte Abhandlungen*, etc., published at Frankfort in 1856. During the past six months, also, a series of papers by Charcot and Bawl has appeared in the *Gazette Hebdomadaire*, in which may be found an excellent summary of what has been recorded upon this subject. Dr. Benjamin Ward Richardson, also, in his recently published Astley Cooper Prize Essay on the cause of the coagulum of the blood, has particularly referred to the influence of the puerperal state in favoring the deposition of fibrin during life; and his remarks in reference to the matter under consideration are worthy of careful study.

There is abundant evidence to show that gangrene of the internal organs, or of the extremities, may be produced by the plugging of the arteries which supply them with blood; and the next question that presents itself is, what is the condition of the blood, or of the arterial coats, which favors the formation of the fibrinous deposits which thus occlude the vessels? Formerly nearly every case of spontaneous gangrene was referred to a fatty or osseous degeneration of the arterial coats, and such mortification was supposed to be peculiar to old age. At length, cases were reported occurring even in children, and we suppose that most physicians, who have been long engaged in practice, have met with the disease in persons under fifty. Dupuytren and Syme have strongly maintained that it is due in all cases to arteritis, an inflammation of the lining coat of the artery. Now the experiments of Virchow, and more lately of Mr. Henry Lee, of King's College Hospital, London, have proved that both chemical and mechanical irritants produce their effects only on the external and middle coats of arteries, and on the outer coats of the veins. It has been found to be a matter of great difficulty to produce, by experiment, an effusion of lymph on the non-vascular lining membrane of arteries; but when once the inner lining has been detached by violence, or removed by disease, the tendency is very strong towards the formation of fibrinous deposits, which may be lodged in any of the organs to which such artery may be distributed. Dr. Oke, of Southampton, England, has reported a case in which the brachial artery became suddenly obstructed after abortion, which obstruction he attributed to the spontaneous rupture of the inner coat of the vessel, and the projection of its edges into the tube. He bases his opinion upon the fact that no abnormal action of the heart could be detected when the obstruction in the left axillary artery took place, nor subsequently, the patient having recovered with the loss only of the integument of the thumb and fingers. Although this case is quoted by Professor Simpson, under the head of "Arterial Obstruction from Spontaneous Laceration, and Corrugation of the internal coat of the Arteries," I feel inclined to question this explanation of the case, for in my own patient Professor Lawson was unable to detect anything abnormal about the heart, and I believe I shall, in the course of my remarks, furnish a more rational view of its pathology. The general fact, that a detached inner coat does favor the obstruction of the artery, cannot be questioned, for it has been well established by experiment, and illustrated by disease.

ARTICLE IV.

THE TR. MURIATE FERRI IN NASAL POLYPUS.

BY J. H. REEDER, M.D., OF LACON, ILL.

I do not remember to have seen the above article recommended for the destruction of nasal polypus: if it has been used by any one, an account of it has escaped my notice.

In November last, a little girl, aged about ten years, presented herself at my office, with a polypus of large size, of the gelatinous variety, occupying the left nasal cavity, completely obstructing the cavity, producing considerable deformity by enlargement of that side of the nose.

I attempted its removal by the use of the ordinary polypus forceps, but owing to the smallness of the external nasal opening, they could not be introduced sufficiently high to grasp the root of the tumor. Pretty free hemorrhage and a good deal of pain to the patient was the only result of my endeavors to remove it. To suppress the former, I injected the nostril with tr. mur. ferri, diluted with water, and then forced a piece of moistened sponge into the nostril with the view of dilating it, and told my patient to return in a couple of days, when I hoped to be able to remove the polypus without much difficulty.

The next morning she called, and, much to my surprise, informed me that soon after she arose from her bed the whole mass had escaped from the nostril posteriorly, and had been thrown out on the floor, a semi-fluid opaque mass. On removing the sponge, I found the cavity perfectly free, not a vestige of the polypus remaining. I directed her to throw up the cavity a preparation of the same, much diluted, for a week or two, every alternate day, which she did. No symptom of return has been noticed up to this time.

The second and last case that I have had the opportunity of treating was Mr. Fairbanks, of this city, aged between fifty and sixty years, who has had polypus in both nostrils for more than ten years, and for that length of time has not been able to force a particle of air through the passages, and consequently has been deprived of the senses of taste and smell. His sight was

also seriously affected, being, at the time of his coming to me, nearly blind.

I applied the tr. mur. ferri, very nearly full strength, by saturating the sponge of a small probang, and forcing it as far up the nostril as was practicable, repeating the operation every alternate day. In about a week, both nasal cavities were perfectly free from all obstructions. There has been no return of the polypus to my knowledge. He has recovered the power of tasting and smelling; his eyes have also materially improved.

BOOK AND PAMPHLET NOTICES.

RAPPORT A LA SOCIETE DE CHIRURGIE SUR L' ELEPHANTIASIS DU SCROTUM. Par M. HTE. BON. LARREY, Chirurgien ordinaire de l' Empereur, Medecin en chef, etc., etc.

REPORT ON ELEPHANTIASIS OF THE SCROTUM, MADE TO THE SOCIETY OF SURGERY. By M. BON. HTE. LARREY, Surgeon in Ordinary to his Majesty the Emperor. Paris. 1856.

This we have no hesitation in pronouncing the best monograph on this disease ever issued from the press.

A memoir, presented to the Societe de Chirurgie, Paris, by the celebrated Clot-Bey, of Egypt, was referred to a commission, of which M. Larrey was the reporter. For the purpose of studying the subject fully, he was induced to enter upon inquiries that have amply furnished him with materials, of which this work is a digest.

He commences with some reflections on the nature of elephantiasis generally, and shows how it is to be distinguished from elephantiasis of the Greeks, or tubercular leprosy—an altogether distinct disease, and confounded with that under consideration, owing to the employment of a vicious nomenclature. He then views elephantiasis as it affects the scrotum; considers its causes, symptoms, complication, diagnosis, prognosis, treatment, terminations and morbid anatomy.

The writer has availed himself of every interesting case on record; and as many of these are scattered through journals under various names, we can well appreciate the trouble ex-

perienced and the perseverance required in first discovering and then divesting them of much that was calculated to obscure and confuse.

We find Dionis, Cheselden, Morgagni, and even the celebrated Larrey, surgeon-in-chief of the French army, employing, in reference to this disease, the term "sarcocele,"—a word without precise signification, and therefore leading to indistinct conceptions. Then we have had "*oscheochalasie*," proposed by Alibert, who afterwards, by way of improvement, substituted the not less objectionable word, oscheo-terastie-sarcomateux. Richerand, in his effort to improve on this, calls it "lymphatic tumor of the scrotum." Now this designation involves a theory; and in the present state of medical knowledge, nothing is more likely to lead to errors of practice than the adoption of a nomenclature resting for support on a questionable doctrine, or some fancied accordance with a speculation in science.

The writer affirms that no name hitherto applied succeeds in conveying correct notions either of the essential nature or anatomical seat of the disease. He thinks the disease, so frequently circumscribed and located in the scrotum, seems to find, in the mere texture of the parts, conditions of existence different from those that could belong exclusively to the lymphatic vessels. This he thinks countenanced by the fact that in elephantiasis confined to the scrotum (and without complication, we presume), inguinal adenitis almost never exists. He appeals to Cazenave, who, he says, "saw with Biett, even an example of elephantiasis of *a limb*, in which there was no sign of angio-leucitis;" and "Rayer," he adds, "had occasion still better to prove the absence of every trace of angio-leucitis." He denies the correctness of the opinion of Alard, who explains the share the lymphatic system has in its production, by supposing there is a rupture of the lymphatic vessels in the acute form of elephantiasis, and a feebleness of the absorbent in the chronic. He assures us this rupture has never been satisfactorily demonstrated; and besides, he cannot comprehend how infiltration of lymph could produce effusions so various,—serous fluid, gelatinous matter and deposits of fibrine, together with fatty matter, accompanied with transformations of cellular tissue and prodigious thickening of the cutis.

He equally rejects the opinion of the disease being caused by a morbid state of the venous system. The nature of elephantiasis scroti he thinks still undetermined; but if he were required to define it, he would say it was "a tumefaction of the scrotum, characterized by hypertrophy and induration of the skin, and subcutaneous cellular tissue, with alteration of the other coats of the testicles; these organs, for the most part, remaining healthy in the midst of the disease."

The endemic nature of elephantiasis next comes under review. The observations of Larrey (sen.) and Titley would lead us to believe that it is a malady of warm climates rather than of cold countries. It has been particularly noticed in Barbadoes, and extends along the whole eastern coast of South America. In the other islands of the West Indies it is not as frequently seen as in Barbadoes. In Brazil it is common. The medical officers in British India testify as to its frequency in Asia. Bengal, the banks of the Ganges, the Malabar coast, Madras, the island of Ceylon, Surinam, etc., are the localities where endemic influence, in its production, is best shown; and some even say that in Japan, one of every ten persons is thus afflicted. He oppugns the doctrine held by Wise and others, that a humid climate exerts a morbid influence in its development, by shewing the Mauritius, though possessing a remarkably dry atmosphere, to contain a great number of such cases.

In some parts of Africa, elephantiasis would seem to be scarcely known, whilst in others it prevails exceedingly. Passing over Algeria, where it is common along the sea coast, we recognize it more abundantly still in Egypt. There was gleaned the experience respecting it by M. Clot-Bey, the writer of the memoir, that led to this valuable report.

In Europe it is infinitely more rare than in the other great divisions of the globe. It is seen, though exceptionally, in some towns of Spain and Italy, near the coast; but such cases as are seen in Germany, Prussia, Sweden, etc., are probably imported. Titley thinks the disease endemic in some parts of Ireland; but we are disposed to think it as exceptional there as in the sister kingdom. In Rousillon in France, however, Delpech thought the malady by no means rare.

As the etiology of elephantiasis scroti is allowed by the writer to be "still obscure and very vague," we will not dwell on the several conjectures advanced as presumable causes, but proceed to its symptoms and complications.

We learn that its invasion is either acute or chronic, with, we suppose, as in other complaints, many intermediate degrees that obtain, as the symptoms are characterized by more or less acuteness. "Hendy, in the description of the disease, which he has studied more in a general than in a local point of view, assigns to its invasion well marked febrile precursive symptoms, with enlargement of the glands." "The swelling of the parts augments, according to him, with or without new paroxysms of fever." "Sometimes," says Delpech, "it is by the prepuce the disease begins, and it may remain there stationary for a longer or shorter time without making marked progress;" "or, rather, the entire of the skin of the penis becomes hypertrophied, and assumes a coriaceous indurated condition before reaching the scrotum." This case is not frequent. Larrey observes: "Sometimes from the lower part of the pubic region, corresponding to the mons veneris in the female, the swelling begins to extend over all the external genital organs, or perhaps in some one point of the scrotum a nucleus of induration forming, elephantiasis declares itself." This he thinks the most usual form. Again, it may be observed invading at once the whole of the scrotum. Though the writer says the disease may begin without appreciable symptoms, and this opinion is in accordance with the observations of Delpech and Hendy, still, "in most cases, the commencement of the attack is marked by a swelling of the scrotum, with fever and very intense inflammatory reaction." "The reaction ceases, but the swelling persists, and becomes more and more decided as induration makes its appearance. This state may remain stationary without sensible increase of volume, but it almost always makes continual progress,—sometimes slow, at other times rapid. The tumor distends, becoming thicker, rugous and brown; the testicles are forced back, so as no longer to be seen or felt, still they undergo no morbid change necessarily arising from elephantiasis. When the disease is of long standing, yellow and scaly crusts appear,

which, being detached, leave ulcerated surfaces behind, discharging ichor."

As the disease advances, and the penis is removed from view, a provision is made for the passing of urine by the formation of a supplemental canal, as it were, formed at the expense of the skin originally covering the body of the penis. This is drawn down by the weight of the tumor, and thus forms a prolongation or gutter extending from the urethra, often for six, eight, or even ten inches, to the middle or inferior part of the swelling, where it ends in a sort of umbilicus or narrow vulva. In such cases, as "the urine cannot be projected from the surface, but flows *en nappe*," we should expect the usual amount of irritation to arise from its contact with the skin; yet experience does not establish the supposition. There would seem to be, to some extent, a capability of resistance acquired by the hypertrophied skin. "The color of the part is not always brown; its surface is frequently blue or livid, owing to a varicose state of the veins, the dilatation of which is excessive." In one case, we are told the veins were so large that one of them equaled the vena cava in diameter.

This condition of the veins so often met with induced many to consider a morbid state of the venous system as the efficient cause of elephantiasis.

"The tumor is very soft at first, yet unlike œdema, in not leaving after pressure the impression of the finger. It gradually acquires the hardness of leather." "The tumor is sometimes hard in certain points and soft in others, giving, as if, a false sense of fluctuation. Though frequently at the commencement there may have been augmented sensibility, yet in the advanced stages there is scarcely any in the tumor, but rather a sense of inconvenience from its weight and volume." Now this is important with a view to operation, and as regards the propriety of dispensing with the aid of chloroform, the depressing influence of which might be contra-indicated when profuse hemorrhage, amounting sometimes to several pounds of blood, constitutes the chief danger of extirpation. An interesting feature of the disease, noticed by Hendy and others, is the intermittent character of the fever, and the well-marked connection be-

tween its paroxysms and the progressive increase of the local affection.

Some false notions have been entertained respecting the condition of the testicles, and their capability of preserving their function unimpaired in elephantiasis scroti. We have in the report a case in point, and we give as much of it as bears on the question.

"An Arab of the valley of Chelif, 40 years of age, married, in 1830, a widow affected with syphilis, and shortly afterwards he had a running from the urethra and ulcers on the penis. These symptoms disappeared in 1830 without having received any treatment. A pustular eruption was the consequence. The patient, as is the custom of the Arabs, made ablutions of cold water to the genital organs, and from that time he saw the scrotum swell in proportion as paroxysms of intermittent fever seemed to augment the swelling.

"Ten years afterwards, he entered the hospital of Orleansville, with a syphilitic papular eruption, and a well-marked elephantiasis scroti. The tumor measured thirty-eight centimetres in height and thirty-six in breadth."

The morbid mass was removed by M. Mestre with the most favorable result, and the patient, we are told, resumed an intercourse with his wife, whom he had repudiated fourteen years previously, and with whom, during that time, there had been a suspension of conjugal relations. There can be no doubt, however, that inaction of organs for several years, together with the compression to which at the same time they are subjected, must, in many instances, lead to their atrophy.

M. Larrey devotes much space to the consideration of the complications met with in this disease. Without following him in all the details, we remark hernia amongst the most frequent complications. Mr. Esdaile (*Medical Gazette*) refers the disease, in a very large majority of cases, to hydrocele; we may, therefore, include this amongst its complications. Clot-Bey, after having observed a great number of complicated cases, says he never say a patient die of elephantiasis. Larrey, however, suspects "that by the incessant growth of the morbid mass, it may absorb, as it were, into itself, the vitality of the subject,

causing death by consumption; or, perhaps, gangrene may invade the tumor, and the partial mortification of the tissues will destroy the patient." A fact of this kind seems to have come under the observation of Hendy. This kind of tumor seems not disposed to degenerate into cancer. Larrey, at least, never saw a case thus terminating. He, however, gives the case of Delacroix, originally related by Imbert de Lonnes, and commented on by Boyer (*Traite des Maladies Chirurgicales*, tom. 10), to express his doubts of its being a case in point, to prove the disease terminating in cancer.

He questions whether the unaided powers of nature be equal to the removal of the complaint in any instance; and thinks there is very little chance of a cure even from the ordinary resources of medicine, except, perhaps, at the very commencement. Nevertheless, he quotes Hendy's celebrated case (vide 22nd, case "Glandular Disease of Barbadoes"), where a man, affected with elephantiasis, awoke one morning having an abundant moisture about his thighs, which proved to be water effused through a fissure or crack in the diseased skin. A few months after this there was a recurrence of the evacuation, and the part was reduced almost to its normal volume.

As the writer details the structure in this disease, he is particularly clear and satisfactory. "The skin at first is not altered; it may even get thin from distention but it soon hardens; becomes thick and rugous; assumes sometimes the consistence of half-tanned leather, even to the thickness of three inches. It then acquires extraordinary extensibility. The epidermis grows thick and scaly. In most cases, the rete mucosum appears distinct. Chevalier saw the papilla exceedingly elongated, enlarged and prominent on the cutis. The normal texture disappears, and becoming hypertrophied, the tissue grows homogeneous, of a white color, of a brawny consistence, very hard, like scirrhus, without appearance or trace of fibres." "Cysts, as it were, are met with in the texture of the altered cutis, and within them there is a variable quantity of serous fluid." "The subcutaneous cellular tissue essentially participates in this hypertrophy by the thickening of its layers, as much more dense as they approach the cutis, and terminating by forming cellulo-

fibrous cavities filled with albuminous or gelatinous fluid. This tissue, when indurated, frequently presents, like the cutis, a cartilaginous texture, and the matter secreted or accumulated within its cavities becomes sometimes so condensed as to form hard cretaceous and schirrhus-like nuclei. These nuclei of altered cellular tissue in some cases are isolated, constituting distinct tumors in the midst of the morbid mass, varying in their nature and volume."

The endemic nature of the disease, its peculiar mode of growth, progressing for years, and the very decided change of structure, would lead us to suppose it was not very amenable to medical treatment, and in this opinion most observers coincide; yet we cannot resist the evidence supplied by men worthy of credence, that not only has it been removed by suitable means, but that it has even disappeared completely from mere change of residence. Gibson, in the Institutes and Practice of Surgery, gives a case of this kind, and a somewhat similar one has been detailed by Larrey, yet he remarks that on the other hand, patients, even young, have come from the colonies to Europe, and, though aided by treatment, have experienced no amelioration.

"Antiphlogistic remedies, local bleeding, emollient poultices and fomentations, baths used in the beginning, frequently renewed and seconded by suitable diet and hygienic precautions, have procured happy results in the practice of Clot-Bey." Larrey doubts if they were lasting cures. He condemns general bleeding, unless employed with great reserve. This is in opposition to Rayer's practice, with which general bleeding entered as an important curative means, and who thought this opposition unfounded.

The writer has but little faith in the efficacy of sudorifics, and shares the incredulity of Delpech in this respect. "Avec quelle defiance," observes the accomplished surgeon of Montpellier, "ne doit-on pas accueillir des observations de guerison operee par des sueurs on telle autre evacuation augmentee, quand il s'agit d'une malade qui ne se complete qu' a la faveur d' un grand nombre d' annees!" Vomits, antimonials combined with mercury, mineral acids, the external application of dilute sulphuric acid, solutions of bi-chloride of mercury, of muriate

of ammonia, and gradual and uniform compression and shampooing, are some of his many means used. In India, English surgeons have been using preparations of iodine; and a case is given in the *Lancet*, July, 1846, by Dr. Brett, attributing a cure to iodine.

The intermittent character of the fever so frequently accompanying the invasion of the disease, suggests the use of quinia, but we have no facts in reference to its efficacy, and in want of such, it is simply proposed for future trial. Some temporary advantage has been gained from arsenic, but it has never accomplished a cure. Setons, caustics, the actual cautery, punctures, scarifications, incisions, blisters, have all been proposed, used and vaunted, but on a close analysis of the supposed successful cases, the eye of science can often detect some fallacy, some error of diagnosis. In many instances, hæmatocele has been mistaken for elephantiasis scroti. "When the tumor is recent and as yet little developed, we may try with some hope of success local bleedings, emollient applications, sulphate of quinia, hydriodate of potash, mercurial frictions, methodical compression and shampooing." Should these fail, we have no resource except in extirpation. Even to this day, says Rayer, the question of the propriety or impropriety of extirpation is not settled. Indeed, we have a host of witnesses to the danger and frequent inefficacy of the operation. Alard assures us that those operated on have either become affected with elephantiasis elsewhere, or have sunk under some inflammatory affection of the viscera. Chopart opposed it from the danger of hemorrhage, yet surgeons seem now beginning to entertain less apprehensions of the operation itself and of its consequences.

Since Baron Larrey and Roux led the way in successful operation, others have performed it, and in the majority of instances with success. But above all, Esdaile of Calcutta has signalized himself. He has operated more than 160 times, and lays down the following rules for guidance: "When the constitution is good, and the patient not more than 40 years, and the tumor does not exceed fifty pounds in weight, it may be possible to save the testicles; but if the age and weight exceed these proportions, an effort should not be made to spare them,

because the patient may die of hemorrhage during the attempt made to accomplish it, and even if he should not, the testicles may be found useless and require removal afterwards." As to the penis, it has always been spared, with one exception, by Mr. Esdaile, whatever might be the morbid mass removed. The mortality, he assures us, has been but five per cent., and in no instance has death been directly occasioned by the operation; and when it did occur, it was at a distance of many days, weeks or months afterwards, and took place from various morbid causes, not immediately connected with the operation. Mr. Esdaile is the writer who has so reprobated the employment of chloroform, for which he substitutes mesmerism, on the grounds that as the latter exalts, whilst the former depresses the nervous system, the peculiar applicability of this agent is sufficiently obvious.

In the operation, certain objects must be kept in view, although particular conditions of the tumor may occasionally require us to vary our proceedings. Thus, sufficient covering must be retained for the penis, testicles and their cords, the remainder of the tumor removed, and the several steps of the operation gone through with as much rapidity as is consistent with the preservation of the genital organs. Baron Larrey's method consisted, 1st, In two incisions, commencing at the orifice of the prepuce, obliquely carried under the testicles of each side; 2nd, Dissecting the tissues in the interval of the incisions; 3d, Removal of the diseased mass. In this manner also, Titley and Græfe operated. Clot-Bey substitutes for the oblique two semilunar incisions, extending from the pubis to the perineum. This mode of operation is termed "*L' extirpation sans anaplastie.*" "*Extirpation avec anaplastie*" consists in raising three flaps of healthy integument,—two lateral, of semilunar shape, and an intermediate one. These are to cover the penis, testicles and their respective cords. A third method, ascribed to Redlich, is, after removing of the tumor, to restore to the penis its original covering. Then there is Lenoir's method, characterized by an incision through the whole thickness of the scrotum, passing anteriorly and in the middle line; the penis is now exposed, and the testicles discovered, dissected and raised with

their cords; then two lateral flaps are cut, and lastly the tumor removed by bold and rapid incision. The patient should be secured as in operation for stone; two assistants ought to have charge of his legs, and one or two of the tumor. Should this be very large, it is proposed to use mechanical means for raising it. "Before beginning operative proceedings, the tumor should be so raised as to allow the blood to return into the general circulation. Search should also be made for a hernia, and if such exist, previously reduce it; and in the operation, the sac should be opened, and tied afterwards at the external abdominal ring. Should the complication be hydrocele, instead of puncturing or incising it, excision should at once be made."

We now take leave of M. Larrey and his able report, with the conviction of having, from the short space allowed us, failed to present it in a light best suited to reflect facts and observations that must be read to be duly appreciated. We trust, however, our readers will see, even through the imperfect medium of an editorial notice, as much as may induce a further acquaintance with the report itself, the perusal of which will amply compensate for the required time and labor.

[In order to give a more adequate idea than can be conveyed by words alone of the magnitude of the growth which sometimes reaches the enormous size of 125 pounds and over, we have taken pains to have prepared the annexed figure, which accurately represents the original, somewhat reduced in size.]

ELEMENTS OF MEDICINE. By SAMUEL H. DICKSON, M.D. Philadelphia: Lea & Blanchard. 1859.

In the preface to this work, the author states that "it is intended as an aid to young men who have engaged in the study of medicine, and to physicians who have recently assumed the responsibilities of practice."

In this age of vain display and empty pretension, this unostentatious statement may give some a very inadequate notion of the merit of a work, which we think not only eminently calculated to answer the end proposed, but also well adapted to be profitable even to those who may deem themselves far in advance of their juniors in a knowledge of their profession. There pervades the volume an easy, unrestrained mode of expression, that cannot fail to carry the reader, almost imperceptibly to himself, over some of those stumbling blocks of science that so frequently in limine discourage the student. Nothing having a practical bearing is omitted. The various theories, under the head of etiology, that have influenced practice are brought under review, and with as much brevity as is consistent with the subject and the design of the work, are subjected to a searching analysis.

We cannot avoid expressing our commendation of the strictly logical accuracy with which the author reasons. This is almost a new feature in medical works; to the absence of which may be attributed the slow progress medicine has made in comparison with other departments of science.

Though we thus favorably notice this performance, yet we must pronounce it an unequal one. It is divided into two parts, —"General Pathology, and Special Pathology and Therapeutics." The former has our unqualified recommendation; the latter, with perhaps the section on fever excepted, does not realize the expectations the excellences of the former had led us to entertain. It would appear as if the author, with a view to render the work compendious, and thus place it within the reach of students, has done himself an injustice, by occasionally sacrificing to conciseness what is necessary to clear conception —graphic and full description; in short, where we want accurate delineation, we have but a hasty and imperfect sketch.

A man so capable of dealing with the abstruse things of the profession, as the perusal of the "General Pathology" will at once show, could with much more ease acquit himself equally well in "Special Pathology and Therapeutics."

On the whole, it will prove a most useful manual, which should not only be in the schools, but deserves a place in the library of every physician.

CORRESPONDENCE.

EDITOR OF CHICAGO MEDICAL JOURNAL:

DEAR SIR,—The following cases having come under my notice, are of so unusual a character, that I have concluded to report them (if deemed worthy) through the columns of the "Journal," partly for the sake of obtaining information, and that, should any of your readers meet such cases, they may have the benefit of my observations.

Three cases have occurred in the same family. The first I did not see, but it was described to me by the family physician as "a case of croup, accompanied with pneumonia, attended with some ulceration of the mucous membrane of the mouth and throat." Termination—fatal.

CASE II.—A. E., five years old, was taken ill on Monday night, January 10th. The parents being very much alarmed, and unable to call Dr. C., the family physician, on account of ice in the river, called upon "an eclectic," who pronounced it croup, and, I suppose, treated it accordingly, until Wednesday, when he gave it up, and Dr. C. and I were summoned.

The patient was so much exhausted when we arrived as to give us little hope for the benefit of medical interference. The urgency of the symptoms, however, induced us to administer an emetic, which, acting, afforded temporary relief.

We regret the extreme prostration which prevented a satisfactory examination of the throat, but we could see the ulceration upon the tonsils. The parents informed me that the child had had a sore mouth and throat about a week.

The immediate danger being from catarrhal symptoms, we prescribed:

℞	Comp. syr. squills,	℥j.
	Copaiva,	℥ss.
	Spr. nitre,	℥ss.

Ft. expectorans.

Of which we gave half a teaspoonful *pro re nata.*

This patient also died as of croup, on Thursday.

The post mortem appearances—external,—as described by the friends, were: unusual rigor mortis; throat swollen even with the chin and discolored; *knotty appearance* of parietes of abdomen, with discolored patches.

Case III.—Girl, aged seven years.

At the time of my first visit, my attention was directed by the parents to this child. She was running about the house, but had this same croupous cough; and I was astonished to find already developed, extensive ulceration of the tonsils, of a pearly color and elevated edges.

Ordered solution of nitrate silver, thirty grains to the ounce, applied twice a day to ulcerated surface. Used expectorant as before prepared.

Friday, 14*th*. Was called to see her. Found her with high fever, furred tongue and anxious countenance. Cough better. Passing rapidly through this first stage, as it were, we find her vomiting a tough albuminous fluid, afterward serum colored with bile. Frequent alvine discharges from the bowels, resembling meat washing. Intense pain, extending from the throat to the stomach and bowels, causing her to strike herself and cry out in the extremity of her suffering.

While upon symptomatology, allow me to digress so far from this point as to follow out the fatal cases in the third or last stage.

Increase of croupous symptoms; tympanitic distention of abdomen, with intestinal pain, increased by pressure; torpidity of bowels; suppression of urine. Death.

To return to the case in hand.

We find that in each case there has existed evidence of abdominal lesion, as well as the post mortem appearance of the

parietes of the abdomen. The inflammation in the throat was apparent; and the intense thirst, tumefaction and tenderness of the bowels, all indicated, as I thought, distinct marks of intestinal derangement, not unlike what we often find in cases where we have inflammation of the mesenteric glands and glands of Peyer. With that view of the case I prescribed—

℞ Nitrate silver, grs. viii.
Liquorice root, pow'd, " xxiv.
Syrup, q. s. Ft. mass.

Make 24 pills.

Of these I gave one every three hours. Increased copaiva in expect. to ℥j., and continued as before. This course was continued until Saturday evening (twenty-four hours), when I ordered a portion of castor oil, and with it thirty drops oil turpentine. Operated well, bringing away long shreds of mucus.

Sunday Morning. Continued pills. Bowels still rather tympanitic. Ordered—

℞ Sub. mur. hyd., grs. vi.
Ipecac., " vi.

Ft. chart. vi. Gave one powder every three hours.

9 *o'clock p.m.* Improving. Less tympanitic; less pain. Discontinued pills.

Monday, 9 *a.m.* Stop powders; gave two blue pills. Operated.

1 *o'clock.* Discharge more healthy in appearance; patient feels comfortable. Directed wine whey and serpentaria infusion.

Not being able to cross the river, did not hear from her for near a week, when I called, and found her sitting up, and, excepting a little irritation about the fauces, enjoys her usual health. I neglected to state that the solution of muriate silver was continued twice a day to the throat during the course of treatment.

The difference in treatment is obvious. The first cases were treated as for laryngeal disease, while in the latter, comparatively little attention was paid to croupous symptoms, and remedies were administered for an ulcerative inflammation of the alimentary canal.

I confess I am at a loss for a name for the disease. Perhaps

some light may be thrown upon the case by stating that there is an hereditary scorbutic taint in the family, although not showing itself in this younger generation before.

Is this a species of scorbutis? a violent form of typoid fever? or, could that inflammation extend, in any way, from the œsophagus to the trachea and produce such symptoms? I think not.

If my communication should be considered worthy a place in your Journal, I would be pleased to hear from some member of the profession upon the subject. Yours truly,

W. S. ROBERTSON.

Columbus City, Iowa, Jan. 26th, 1859.

[The three cases detailed by Dr. Robertson present symptoms of diptherite, a disease that has been prevailing in England and America within the last year to a fearful extent.

We congratulate our correspondent on his success in saving even one patient out of the three. The same good fortune has not attended the efforts of others when they had to deal with the disease under conditions marked by the same malignancy of development. We, however, attribute the favorable result in the third case more to the application of nitrate of silver in solution to the fauces, and to its tonic properties when prescribed in pills, than to the purgative action of the castor oil and turpentine.* Neither can the improvement observed in this case at 9 o'clock p.m., on Sunday, the 16th, be fairly attributed to the action of the calomel, considering that it was ordered on that morning, and not more than one grain every third hour prescribed. Turpentine has certainly been recommended by some who have given their attention to the disease. Dr. Perry advises ʒij. of the ol. terebinthinæ to be rubbed up with the yelk of egg and ʒxij. of syrup; one teaspoonful to be given in milk every second hour.

As diptherite is just now exciting much interest, and as our table is covered with the results of the most recent inquiries respecting this disease, we purpose, in the October number, to

* We do not take into accou t the wine and serpentar.a, as they do not seem to have been prescribed until the danger was over.

present our readers with whatever in reference to it is contained in recent publications deserving of notice. At the same time, in giving a summary of opinions gleaned from American and foreign works, we will endeavor to unravel from the confusion a subject which, from its having several points in common with other diseases, appears, at first view, inextricably entangled with them, though really separated by essential differences.]

EXTRACTS.

On Macula Cachectica. By Dr. James Whitehead. (Third Report of the Clinical Hospital, Manchester.)

Ranking's Abstract, 1859.

On the Treatment of Purpura Hæmorrhagica. By Dr. S. L. Hardy, Physician to the Hospital for Diseases of Children, Dublin. (Dublin Hospital Gazette.)

Idem.

We notice the observations of Drs. Whitehead and Hardy together, as they refer to the same disease, though presenting under different phases. We quote from Ranking's Abstract the following remarks of Dr. Whitehead:

"A maculated state of the skin is frequently met with in the children of this class of people, consisting of small circular spots, the size of face freckles; not, however, occupying the face and hands as freckles do, but every other part of the body except the feet. They seem to infest parts covered with the clothing, while freckles are only seen on parts exposed. They have a purple color, like the maculæ of typhus, not a pale yellow like freckles, and are unassociated with any form of disease saliently expressed; but they seem, nevertheless, to indicate a depraved habit of body. The skin has a sickly, depraved pallor, the flesh is flabby, the temper fretful, and the energy subdued. The parents appear to regard their presence as natural and unavoidable, as they are never the subject of treatment, nor is attention directed to them when the body is examined for other purposes. They seem peculiar to the lower classes, and are caused by sloth and personal neglect, as they are never met with in the offspring of the cleanly and thrifty. There is no doubt that this macula cachectica is in reality a disease of the

skin, due proximately to interrupted cutaneous transpiration. Its cause is uncleanliness. Such children are seldom washed, except the hands and face, oftener than once in many weeks, and even then very imperfectly and without the use of soap. When the children get older, and the washing process is left to themselves, it is still less perfectly done, and the whole body is not washed, in the vast majority of instances, once in several years. In such persons the spots which appeared in infancy are often seen up to adult life."

We would not have transferred so much of this "Report" to the columns of the "Journal," if it were not for the purpose of showing how distorted views and partial statements prove, in medicine, a fruitful source of fallacy. We deny that the disease in question is ever caused by mere uncleanliness, or that "it is peculiar to the lowest classes." Under the title *macula cachectica*, our readers may recognize *purpura simplex*, a disease by no means uncommon, particularly amongst the ill-fed children of the poor. Still, we must not suppose it confined to such. We have seen it in children where neither poverty nor want of cleanliness could be suspected of having any share in its production. Practical men view it as a disease proceeding from a general deterioration of the solids and fluids of the body —one in which there is a change in the crasis of the blood. This is defibrinated, and escapes from vessels that are impaired in their integrity. We do not object to the "washing process" as an important hygienic means, but should think it, by itself, very inadequate, indeed, to remove the cachectic condition of the system. Iron, quinine, and tonics, combined with astringents (having previously administered purgatives), will be likely to prove more efficient remedies, and more consistent with our notions of a rational *methodus medendi*.

In the same number of *Ranking's Abstract*, there are four cases of *purpura hemorrhagica* detailed by Dr. Hardy. These all recovered under the use of tincture of larch bark. The virtues of this tincture are, we presume, due to turpentine and tannin. These certainly have been found useful remedies in such cases, even when administered separately, and there may be some advantages in prescribing them in union, as they are in the tincture. Tannin and gallic acid are, with some, favorite

medicines in *purpura*, and more than thirty years ago, turpentine was extolled by Whitlock and Magee (*vide Edinburgh Medical and Surgical Journal*, vol. xviii, p. 540, and vol. xvii, p. 307) for its efficacy in the same disease. The dose of the tincture varies according to age, from eight drops three times daily, to fifteen drops every two hours. It was given in lemonade, which generally constituted the drink of the patient. The food consisted of vegetables and fruit.

Displacement of the Coccyx sideways. By Dr. Ræser. (Prager Vierteljahrschr, Nov. 18th, 1858, and Edinburgh Medical Journal, Nov., 1858.)

Case.—"A corpulent woman, aged 36, fell from a table on a chair, so that its back came right between her thighs. She instantly felt severe pain in the coccyx, but continued able to move about till evening, sitting increasing the pain very much. In the evening, the pain was so great, extending up the spine, that she was obliged to go to bed, and soon after could neither turn nor rise up. After a painful night, R—— found this otherwise blooming woman quite immovable, with distorted features; she complained of violent pain in the coccyx, and a painful tensive drawing feeling from below, up to the neck, which also extended down the arm. She could move the forearm a little. The slightest motion of the body or head to one side was impossible, and still more so, sitting up in bed; confused headache, and some mental disturbance, were also present. She made no complaints of her lower extremities, nor of her arms, and urinated without difficulty. After placing her on her right side, a small swelling, the size of a hazel nut, was felt near the notch of the buttocks, next the left ischium, which on closer examination proved to be the coccyx separated from the sacrum, and forced from the mesian line towards the left ascending ramus of the ischium. The obtuse end of the sacrum could easily be felt between the buttocks. By placing one finger in the rectum, the dislocation of the coccyx could be still more easily felt. Forcible pressure downwards and towards the right buttock caused it suddenly to glide into its normal position, whereupon the patient declared herself relieved, herself as if roused from a dream, and all her pains vanished. She could move about freely, but pain in the sacro-coccygeal region prevented her sitting up. Her expression was also

completely changed. After a few days, a dull pain in the sacro-coccygeal region, preventing sitting, was all the uneasiness that remained; and in five days, all of this that was left was a slight burning sensation at the injured spot."

"The irritation of the spinal marrow observed in this case, in which only the very lowest filaments could have been disturbed, and which nevertheless sent the stream of disturbance to the brain itself, is a most interesting example of mechanical irritation, as evidenced by its instant disappearance on the reduction of the dislocation."—*Ranking.*

This must be a very rare accident. Many surgeons even deny the possibility of its occurrence, and particularly so after forty years of age. Accidents are by no means unusual in the sacro-coccygeal region, but then, when severe, and the subject past thirty years, it is a fracture, not dislocation, we have to deal with. And as we reflect on the mode of union subsisting between the saocrum and coccyx; on the security provided for, by a strong posterior ligament, by a fibro-cartilage, similar to what exists between the vertebræ, stretching from the base of one to the point of the other, and by a muscular apparatus extending from the coccyx to the ischium, it becomes evident that an injury sufficient to alter the relations of these bones, to such a degree as to cause complete luxation, must be attended not merely with such symptoms as occurred in the case detailed, at the time of, and immediately following the accident, but will most probably give rise to extensive abscess in the loose cellular tissue around the rectum. The ramifications of the middle sacral artery are in almost all such cases ruptured, and the blood effused generally leads to suppuration. Even where there is neither fracture nor dislocation, contusions in this region often induce grave symptoms. Though the contusion leaves no visible traces — no ecchymosis — a pain darting from the point of the sacrum extends to the sacral and femoral regions, attended with great suffering in defecation and urination. About the fifth to the seventh day, a rigor takes place, with a sense of fullness and pulsation in the part. An abscess forms, on opening which we find the rectum denuded, and most probably, also, necrosis of the coccyx.

CURIOSITIES OF MEDICAL LITERATURE.

Under this head we purpose occasionally to chronicle some of the "sayings and doings" of members of the medical profession, of reputed sanity; not with a view to the sanction of unauthorized proceedings, but as a warning to others to avoid practices that can only result in disgrace and trouble.

On the Delivery of the Child by Turning, as a General Rule in Labor. By Mr. E. Garland Figg, of Borrowstowness. (Medical Times and Gazette, Ranking's Abstract.)

In this paper, Mr. Figg attempts to show, not only that delivery by turning is preferable to delivery by the forceps in cases requiring operative interference, but that turning is the rule to be adopted in general cases. He tells us that he has attended sixty labors since writing these papers; that only three of these were conducted as head presentations, and that of the remainder two were breech presentations, and fifty-five deliveries by turning. As the results of this astonishing practice, we leave Mr. Figg to speak for himself:

"With regard to the children, they are generally still from two to five minutes, and in some cases, half an hour's duration. In many instances, the first arm brought down is a little painful when moved, for a day or two. I confess with humility, I have even broken four arms, which, though they occurred in cases of great pelvic contraction, were attributable to my own mismanagement in pressing over the shaft of the os humeri instead of following its line to the elbow. Should you commit the same error, with similar result, be not too candid to the relatives, but at once by your own dictum transubstantiate the injury into a slight sprain received by the infant striking its shoulder against the backbone of the mother while actively prosecuting its uterine gambols. It will pass current, more especially if you appeal to her experience, when it is sure to be corroborated by a quotation and the day and hour of the occurrence. Two slips of pasteboard applied, with a strip of calico a yard long, remedies the evil in ten days. In establishing a comparison between the advantages derivable from turning in primiparæ and multiparæ, I believe there is a preponderance of argument in favor of the former. In a primapara the os uteri is more in the axis of the pelvic brim, the body of the organ being more inclined to the perpendicular, and not projecting anteriorly, as in the frequent parturient; hence, in the former case, the uterine efforts of the last month previously to labor lodge the os and cervix, inclusive of the head, low in the cavity of the pel-

vis, not only assuring the practitioner by tangible proof of the perfect capacity of the brim, but also presenting the best arrangement for the co-operation of the uterus with his extractive efforts. In the latter case, from the yielding of the abdominal muscles in former labors, the fundus bearing forwards throws the os in the direction of the spine, rather than the pelvic cavity. Hence, until the contraction of the muscles in some measure restores the proper axis, no advance can take place. The advantage in the second particular is briefly explained, by stating that in a primipara the antagonistic force is directly in line with the extractive. In a multipara it is entrenched round a corner. Again, in a primiparal case, you have good grounds for the conviction that in obviating the perineal stage, you limit the labor considerably; while in the latter patient an hour's suffering might conclude the case. Be they right or wrong, these are the sentiments that have guided my conduct in a large majority of my cases lately, experience appearing to justify in happy results what theory dictated in sound reasoning. I hope I shall soon lose all mental impressions of a head lingering on the perineum, or stationary from failing pains for hours. My primiparal patients are up in four days, without swelling of vaginal muscles, nymphæ or labia; *and what to me is perfectly unaccountable*, with very slight laceration of the perineum. I have had but one maternal death where the infant was turned, and that occurred five days after the event, by inflammation of the peritoneum of a patient, who with contracted pelvis had submitted to the ordeal to produce her sixth full-timed dead child. If I be entitled to any credit at all, it is for the candid avowal of a practice that some, under fear of professional censure, would have adhered to, but concealed."—*Ranking's Abstract.*

We find from statistics now before us, that out of 169 cases of turning, where the result to the mother is specially mentioned, 11 mothers died, or 1 in 15, and in 542 cases where the result to the child is detailed, 182 children were lost, or rather less than one in three. This is the result of the practice of Mad. Lachapelle, Mad. Boivin, Clark, Collins, Cusack, Gregory, Beatty, Churchill, etc. Their names are sufficient guarantee for skill. Mr. Figg states the children were generally still-born, some for "half an hour's duration," and as he tells us of no deaths amongst them, we infer he implies there were none amongst the sixty labors. But what is to us just as

"unaccountable" as to himself, if the children escape death, how the mothers that are primiparæ escape laceration of the perineum. We appeal to the experience of any midwifery practitioner, if some of the most anxious moments of his professional life have not been caused by cases where turning was necessarily resorted to in primiparæ, and where the chances of the infant's life and of the mother's perineum lay in the balance. Yet Mr. Figg proposes to manufacture recklessly — we may almost say unscrupulously — this very state of things, which to others so often involves a distressing alternative — either a dead child or a mutilated mother. He says his practice is based on "experience" and "sound reasoning." Quite the contrary; it is in direct opposition to the experience of the most successful practitioners, and utterly at variance with humanity, nature, and common sense. We therefore refuse to accept his conclusions, and after the sage advice he so conscientiously gives for deceiving the friends of our patients, he will excuse us in telling him that even his facts are open to suspicion.

A case of Cesarean Operation performed with success. By M. Borie. (Memoires de l' Academie Imperiale de Medicine. Paris, 1857-58.)

"This was performed at the Maternite at Tulle, on the person of a ricketty but hardy primipara, aged 29, in whom the space between the sacro-vertebral angle and the triangular ligament of the symphisis pubis measured but from five to six centimetres at the utmost. A living child was delivered, and the woman recovered rapidly. Chloroform was employed, and a longer incision than usual was practised in opening the cavity of the abdomen."—*Medico-Chir. Rev., July*, 1859.

On the amount of utility of Permanent Exutories in the treatment of Chronic Diseases. By M. Zuskowski.

1st. *Permanent Exutories in Chronic Phlegmasia.*—Lesions which result from chronic inflammation, when exempt from all diathesic influence, are generally, even after a very long period, susceptible of resolution. It is especially in disease of the

articulations that the greatest number of successful cases have been observed. Of 58 of the cases of Pott's disease and white swellings, the exutories were the sole means employed in 22; they were used in conjunction with other means in 12, and in 24 they were resorted to after other measures had failed. A no less positive amount of success has attended their use in chronic myelitis and the consequent paralysis—44 instances of recovery from such paralysis, with or without vertebral disease, being on record. Of 20 cases of amaurosis, 7 were treated exclusively by exutories, and 13 after the failure of other means; permanent success resulting in the whole. So with 30 cases of various descriptions of ophthalmia, the great bulk of which had previously been treated without success. Besides these may be mentioned old cases of pleuritic and peritoneal effusion.

2. *Exutories in Tuberculization.*—The author reports ten instances of pulmonary consumption treated with success by exutories. These individuals were all the issue of healthy parents, with no antecedent phthisis in their families. There were no concomitant nor anterior abdominal affections, signs of scrofula, or disease of the bones or joints, but all the patients had cavities at the upper part of the lung, accompanied by the usual cortege of symptoms.

3. *Exutories in Neuroses.*—Their beneficial effect has been observed in ten various forms of these, whether relating to modifications of sensibility, motility or impressionability, or to aberrations of the perceptions of the intellectual powers, or of the moral and affective faculties. Seeing, then, how useful this means may often prove, how comes it that it has fallen into discredit? By reason of the abuse which arose from its indiscriminate employment, whether suitable indications were present or not. Among the conditions which should oppose the use of permanent exutories as a means of treating chronic disease, are the following:

1st. *Deep seated alteration of structure.*—For example, the atrophy or melting down of an organ, which has already given rise to symptoms of resorption or colliquation. In subjects placed even in the most favorable conditions, if the organs have undergone deep-seated alterations, if the general reaction is continuous, giving rise to disturbance of some important function, and especially if nutrition be already deeply impaired, not only have exutories no longer any chance of success, but they may even hasten the fatal termination.

2d. *Degenerations.*—Without speaking here of primary heteromorphies, for which no one would think of applying exutories,

we allude to those insidious transformations of simply indurated or hypertrophied tissues, which are brought about either by the sole effect of chronicity, or under the influence of some diathesic or hereditary condition.

3d. *Tuberculization.*—Although exutories may exert a beneficial action in cases of isolated tubercles, limited to a circumscribed portion of an organ, they offer no chance of success in general tuberculization—that is, when the diseased process has been set up in several organs at once, or even in several parts of the same organ.

4th. *Hereditary influence.*—This exerts great pathogenic influence in chronic disease. Next to tubercular affections, it is in the neuroses especially that it plays so immense a part. In the examples of epilepsy and insanity, in which exutories have proved useful, the patients have been exempt from this fatal influence. Unfortunately, these are the rarest cases; the immense majority are subjected to hereditary influence, and exutories will fail to exert any salutary effect on them.—*Medico-Chir. Rev.*

EDITORIAL.

OPINIONS OF THE PROFESSION CONCERNING THE "REFORM SCHOOL."

We have taken pains to mark every notice of the medical department of the Lind University which has fallen under our observation since the issue of the circular of the proposed school. Thus far its reception has not been flattering. The little axe carried down to Louisville to be ground was rejected; the prospect at Decatur was so poor that no attempt was made to get an endorsement directly, and an indirect one to get a member of the faculty recommended as a candidate for President of the American Medical Association next year signally failed, the society thinking, apparently, that there might be a man in all New England capable of filling such an office.

Among the medical journals few seem to have regarded it as deserving of comment. The exceptions are the New York Monthly *Review*, the New Orleans *Medical News and Hospital Gazette*, the Cleveland *Medical Gazette*, and the Nashville Monthly *Record*.

The first of these, edited by Austin Flint, jr., who, to alter a proverbial phrase a little, may be said to be "a spark from the old stove," has the following paragraph respecting it:

"Prof. N. S. Davis, formerly the editor of the Chicago *Medical Journal*, who was connected also with the Rush Medical College, withdrew, with several of the faculty, and established the Lind University upon the principle which Prof. Davis has so long advocated. Whether it will be a success remains to be seen; we regard as extremely doubtful both its success and its benefit to the cause of medical education."

The New Orleans journal, edited by Drs. Brickell and Fenner, intimates its doubts gently, as follows:

"We notice that there are eleven professorships, and there are junior and senior departments, in the first of which the students attend the lectures on five branches, besides dissecting; and the second they attend lectures on six branches, besides clinical lectures and dissecting. All our readers know we are the strong and practical advocates for improvement in medical teaching, and we hope this scheme may succeed, but we can't exactly see through it. We fear the matter is a little too complicated."

Prof. Weber, of the Cleveland *Medical Gazette*, which we have already announced, makes the following remarks, full of force, concerning it, after giving the plan of instruction:

"Now it requires a good deal of imagination to be able to compare this new mode of teaching in the Lind University with the systematic training of the medical student in the old schools of Europe, where eight terms, and sometimes ten, are required, and the student hears lectures on one subject not only *once*, but two or three times over again.

"If the medical student of our country is to learn his profession by listening to lectures; *one course* on one particular subject, ever so ably and minutely delivered, and regularly attended, will not qualify him to understand the subject completely. It requires *time* and *study* to comprehend *any* of the branches of the medical sciences thoroughly. Ever since we have been connected with medical teaching we have felt the deficiency of our present system, and we will hail the time when all the institutions of our land shall raise the banner of TRUE IMPROVEMENT in the great cause of medical education. But we must have an entire revolution of the present condition of things; a little stirring, a little change will not benefit the student nor

the profession, nor those who brought this change about—*experientia docebit.*"

Prof. Wright, of the Nashville Monthly *Record* for July, goes more into details. His objections may be enumerated as follows:

1. Of the list of Professors' names paraded, one is an Emeritus, and two others are given twice, so that this pretended increase is a deception.

2. General pathology and physiology should be taught by the same chair. It is a mistake to separate them. Prof. Wright may justly think the chair of public hygiene superfluous.

3. Assigning medical jurisprudence to an aged gentleman, instead of a physician, renders that chair practically of little value, as the principal facts of the science are found in the fields of chemistry, anatomy, physiology, obstetrics, etc.

4. The division of surgery into two parts is objected to.

Prof. Wright also makes an objection to the fees, which we deem less feasible than each of the former, which are all well founded.

These are all the notices of the "reform school" presented in our exchanges. Diminishing the number of lectures and the number of terms required is evidently not regarded as "reform."

CHICAGO CITY HOSPITAL.

This institution is now open for the reception of patients, under the care of the medical board already noticed in the Journal. The terms of service of Drs. Brainard and Miller will commence Oct. 1 of each year, and continue four months. Patients from a distance can receive the benefits of the institution by paying board, without further charge.

It is a source of no little gratification to us to see this fine building put at length to the use for which it was intended, and so perfectly adapted. The opening of it has been effected in face of a strong opposition coming from the homœopathists, and a part of the medical staff of the so-called Mercy Hospital, who in this matter have co-operated with a zeal and perseverance indicating a full understanding.

We have already had occasion to state the terms upon which that commencement opened, and the dishonest way in which those who furnished it had been deprived of attendance in it. This, since the opening of the City Hospital, has become a matter of little consequence, as the city and county poor will soon have a building adapted to their wants, and the sooner the Mercy Hospital is closed the better it will be for all parties. The number of cases of typhoid fever, etc., occurring among the students who have visited it sufficiently indicates the condition of its inmates. It is but justice, however, to state that those who have charge of it, even if more accustomed to the proper conducting of a hospital than they are supposed to be, could but imperfectly remedy the evils experienced, as the building was originally intended for other purposes, and is not adapted to its present uses.

How the physicians who are connected with it, and who have made every effort to defeat the opening of the City Hospital, in concert with irregulars, by repeated false publications in the daily papers and otherwise, can justify themselves, we are at a loss to conjecture. Certain we are that the enlightened medical profession of the North-West will not in any manner endorse such a proceeding.

☞ The book notices, selections, etc., of the present number of the Journal, have been prepared under the direction of W. Godfrey Dyas, M.D., Fellow of the Royal College of Surgeons, Ireland, late Demonstrator of Anatomy in the University of Dublin, etc.

Dr. Dyas is an accomplished scholar, an experienced editor and reviewer, and we deem ourselves fortunate in being able to announce that the same department will in future remain under his supervision.

THE WHITNEY CASE.

"We, the Academy of Medicine, after a full examination of the reports of the case, and the post mortem examination, do

consider that the death of Mr. Whitney was in nowise the consequence of improper treatment, but was the unavoidable result of *a complication of disorders.*"

(*Proc. Acad. Med., N. Y.*)

It is much to be regretted that the Academy of Medicine, in delivering their opinion in reference to the above case, did not think proper to enter more into detail and state the grounds of that opinion. We once knew an indifferently-educated member of our profession, when interrogated rather closely as to the nature of a disease, take refuge in the same vague expression, and say his patient had "a complication of disorders."

The simplest form of disease seems often obscure enough, but when told it results from a complication of disorders, none but active and enquiring minds (and such are not those of the majority) will choose to trouble themselves with what is mystical and unintelligible.

When we consider how excited the public have been in connection with this case, we would expect the Academy to feel a responsibility rested on them to decide less indeterminately the matter in question.

As their "resolution" leaves it, it not only does not award a full measure of justice, but gives no satisfaction whatever to the medical men more particularly concerned or to the public. The omission, however, has been supplied elsewhere. Professor Bennett, of Edinburgh, and the celebrated Rokitansky, of Vienna, have not hesitated to state their views. We publish Professor Bennett's letter, and refer our readers to the columns of the *American Medical Monthly*, for September, where they will find Rokitansky's communication.

We have hitherto abstained from all expression of opinion as to the relations that have arisen to the parties so unfortunately identified with the case.

We do not impute to any, improper motives in introducing to the notice of the public a supposed disastrous result of proceedings, conceived and conducted, as we believe, in accordance with science. But we do deplore what must appear to many a want of professional decorum and a seeming disregard of another's feelings. Occurrences like these tend to lower the pro-

fession in public estimation, and to lessen confidence amongst those who, from community of pursuits, of sentiments, and, to some extent, of position, should be linked in sympathy together. It is a mistake also to suppose that he who disparages, will rise in proportion as he sinks another's reputation—quite the reverse. He who thus lowers his profession, equally with the rest, suffers in public esteem, participates in the degradation he has inflicted on another, and earns the distrust of his fellows, who well know that inferior minds are sometimes quick-sighted enough to detect errors, though perhaps unable to correct them.

PROFESSOR BENNETT'S LETTER.

EDINBURGH, *May* 18, 1859.

MY DEAR DOCTOR—I have hesitated for some time as to how I ought to reply to your letter; that is, whether it would be better to enter into a lengthy criticism of Mr. Whitney's case, or simply answer the two queries you have put me. After carefully studying the case itself, I find so much to comment on in the various branches of diagnosis, pathology, treatment and ethics, that I feel constrained to throw my notes aside, and give up the idea of entering into the matter fully, as it would oblige me to write a treatise rather than a letter.

You request my opinion: As to the tubercular character of the pulmonary abscess; 2. As to whether such effect as Dr. Beales intimates could have been produced by the injection of nitrate of silver, which was employed.

1st. *As to the tubercular character of the pulmonary abscess.*—The description given by Dr. Green of the physical signs on the 25th October, 1858, is remarkably clear (see *Am. Monthly*, p. 104), and can leave no doubt as to the existence of condensation of the left lung at the apex, with softening of the tissue. When Dr. Beales was called in, Dec. 14th, he does not seem to have made any physical examination of the chest. At all events, no account of any is given from that time up to the period of the patient's death (*Monthly*, p. 111 to p. 115). But he tells us afterwards, that he had previously made such examination (p. 117) towards the end of October; he gives no description of these signs, but only states his opinion, viz., that "he could not discover any tubercles in his lungs, and did not believe any existed." The report of the post mortem, however,

demonstrates that the physical examination of the lung made by Dr. Green was in every respect correct (*Monthly*, p. 116). "The whole of the upper part of this lobe (the left) was red, and solid—hepatized." "At the commencement of the bronchial ramifications there was an open cavity, about the size of a small black walnut, of a reddish-brown color, and irregular villous surface, as though a slough had separated." This answers thoroughly for the flat sound, detected two months previously, over the upper portion of the left lung, and the humid rale audible below the left clavicle, on inspiration and expiration."

As to the nature of the disease, Dr. Beales conceives it to have been acute and recent pneumonia (p. 118). I cannot think so, when I consider the accurate account of physical signs given two months previously, then indicating the condensation and softening which were subsequently found. It must have been chronic pneumonia passing into gangrene, or a limited tubercular abscess, accompanied by chronic pneumonia of the apex. The descriptions given of the lesions do not enable me to say which of these it was. In fact, I consider it a matter of little importance, because a chronic exudation of the apex so readily passes into tubercle, and an old tubercular abscess is so commonly accompanied by chronic pneumonia, that, in truth, it often becomes difficult, if not impossible, to say where tubercle ends and pneumonia begins. It is enough that a chronic *exudation* was there, and that, I consider, Dr. Green fully indicated by his physical signs six or seven weeks before Dr. Beales was called in.

2d. *As to whether the treatment caused the disease.*—Dr. Beales informs that Dr. Mott told the family, after the post mortem examination, that they had not seen any disease that might not have been produced within a week (*Monthly*, p. 118). According to this idea, it could not have been the injection into the trachea which caused the pulmonary disease, as that operation was performed on the 6th of December, without causing any irritation, and he died on the 21st. Besides, the pulmonary lesion existed on the 25th October, as proved by physical signs. The injection, therefore, could not have caused that lesion. Is it not more probable that, a chronic exudition having existed at the apex, and a cavity formed, this latter perforated the pleura, causing the pleural exudation, followed by the emphysema of the cellular tissue? At what moment did this perforation take place? We are told that Mr. Whitney visited Dr. Green on the 14th of December, after breakfast (the time is not stated); the doctor passed an instrument into his throat,

and finding some obstruction, he pushed the instrument with some force; he (Mr. W.) felt something give way, immediately experienced *severe* pain about the top of the windpipe, and told the doctor he had "hurt him;" he returned home, informed the family of what had occurred, and was seen by Dr. Beales at 1 P. M. (p. 112). Dr. Green's account of what happened on the 14th is different. According to him (*Monthly*, p. 106), when the sponge reached the glottic opening, the patient partially closed the throat, so that the instrument did not enter the windpipe at all. It was at once removed, no more force having been used than that which is constantly employed every day in operations on the air-passages. The patient, after talking awhile with Dr. Foy and myself, and remarking that "the operation hurt him more," or that "he felt it more than usual," he left, with the arrangement that he should return the next day and have the tube employed. The patient's account to Dr. Beales is, that at the moment the probang was arrested at the glottis, he felt something give way, and experienced *severe* pain about the top of the windpipe (p. 112). But is this consistent with the fact that he talked for awhile with Drs. Foy and Green, and went home, intending to come next day, etc.? Again, was the pain, if felt *at the top* of the windpipe, symptomatic of perforation of the pleura in the chest? It appears to me difficult to answer these questions, more especially when we read the account of the alarming condition of Mr. W. at 1 o'clock, when first seen by Dr. Beales (*Monthly*, p. 111). I am, therefore, inclined to ask, What occurred in the interval between the patient's leaving Dr. Green and his seeing Dr. Beales? This may have been an interval of three or four hours, and of this most important period I can find no account whatever. It is true, Mr. Whitney seems to have had the impression that his severe symptoms commenced when the sponge was arrested, but this is negatived by the evidence of Drs. Green and Foy, who saw no evidence of severe pain, even in the throat. When, then, did the pulmonary and pleural perforation take place, which induced the emphysema and subsequent symptoms? With the facts at present before me, I cannot answer this question, but it is clear to my mind that it may have occurred during the hours not accounted for; that it might have been altogether spontaneous, connected only with the progress of the chronic pulmonary lesion, and that it had no relation whatever to the operation performed by Dr. Green.

In addition to the lesion already referred to, it appeared, on dissection, that there was an abscess behind the larynx, and stretching towards the left of the pharynx, the size of a hen's

egg, with an opening at its upper and posterior part, into the pharynx, large enough to admit the end of the forefinger. This abscess was not discovered before death, by any of his attendants, medical or surgical. Dr. Mott, a great authority in surgery, asserts that this was an acute abscess. Dr. Beales distinctly states (*Monthly*, p. 119), that in his opinion it was caused on the 14th December, by the accidental laceration of the pharynx by the probang; and his account of the symptoms, as he observed them at 1 P. M. on that day, supports the supposition, especially the intense pain in the region of the larynx, shooting through to the cervical vertebræ, and down the course of the trachea to the chest; he kept grasping the larynx, etc., (p. 111). Now, as the larynx was shown subsequently to be healthy, it is very probable that these symptoms were connected with the pharyngeal abscess. But how? Is such pain consistent with the first commencement of an abscess, or did it accompany the rupture of an abscess previously formed? By what signs was it pronounced to be acute? Might it not have existed before the operation of the 14th? Might it not have come on subsequently? On all these points I will not venture to speak. But having now used the probang in many hundred cases, and under all circumstances, I am at a loss to understand how its being arrested at the glottis would either lacerate the pharynx, so as to give rise to an abscess, or cause the bursting of an abscess which had already formed—"downward, behind and below the thyroid cartilage." I cannot but think that the application of the sponge had no more to do with this abscess than it had with the exudation into the apex of the left lung.

Yours, very truly and sincerely,

J. HUGHES BENNETT.

RUSH MEDICAL COLLEGE.—PROF. ALLEN.—If the balance of the new appointments in Rush Medical College are as judicious as that of Prof. Allen to the Chair of Theory and Practice, the School will offer attractions of a very high order; and large classes will be likely to convene annually under the droppings of an institution which adopts the celebrated Rush as its patron Saint. Prof. Allen was identified with the organization of the Medical Department of the University of Michigan, and for four years continued his labors in that institution. As a scientific lecturer, he is, in our judgment, unsurpassed; at least, it has never been our fortune to listen to his superior. His lectures are always strong, clear, and convincing. His style is terse and axiomic. Conceiving in his own mind a clear and definite idea of the subject under consideration, separating truth from error, and reducing facts to general philosophy, he never fails to present truth with a clear and bold outline, and in a highly assimilative form. His acquisition is fortunate for the Rush Medical College; and while we regret that Dr. Allen leaves Michigan, we can but commend the sagacity which secures his services, and express our sincerest wishes for his personal welfare.—G., *Peninsular and Independent Medical Journal.*